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ORIGINAL ARTICLES.

A NEW AND SUCCESSFUL TREATMENT OF HAY-FEVER—THE VIEWS OF THE PROFESSION.[1]

By SETH S. BISHOP, M.D.,
OF CHICAGO.

I HAVE endeavored to solve the perplexing question why attacks of hay-fever, or nervous catarrh, come on persistently the first thing in the morning on awakening from sleep. This happens even when the previous day has been one of immunity, and the night one of undisturbed repose; when there has been no change in the contents of the sleeping-apartments and no ingress of dust or air through any direct communication with the outside atmosphere.

I hope, but do not insist, that my studies and experiments in elucidating the cause of these attacks have resulted in solving this problem of hay-fever. If so, it will become apparent what an important advance we shall have made in the pathology and treament of this disease.

It is necessary to make this paper only an imperfect abstract of what I have prepared, for the following reasons: My desire to present the latest obtainable information on the opinions and treatment of the leading specialists and writers; the large amount of original observations and experiments and corroborative evidence I have accumulated; and the specified condition that the essay "must not exceed four thousand words."

Uric acid as a cause. Human blood is normally slightly alkaline and contains uric acid in the form of urates in small quantity, about five to eight grains being secreted every twenty-four hours. When a much larger quantity is secreted it is capable of producing irritation and inflammation of certain structures of the body, unless it is promptly eliminated. It is well known that uric acid has an irritating action on the nervous centers. Alexander Haig, of London, a sufferer from migraine, or sick headache, accounts for vertigo, convulsions, depression, irritability, sleeplessness, pains and neuralgia of varying sorts, migraine, paralysis, etc., by the excess of uric acid in the system. He regards the various functional disorders as a result of the vascular conditions produced by uric acid; and these views are concurred in by Thomas J. Mays, Murchison, Conklin, Ebstein, Quinquaud, and others. Haig studied, in his own person, the relation of uric acid to attacks of migraine, a functional nervous affection, and found that during the attacks the uric acid predominated in the blood. Its presence in excess accounts for exacerbation of pains in rheumatism and gout, and Lever contends that these diseases are primarily due to the action of this acid on the brain, the spinal cord, or the solar plexus of nerves.

In persons suffering from intense itching, uric acid and the urates are found in excess. Periodic sore-throat, which often comes on about the beginning of May, yields to anti-uric-acid treatment, or a change to a warm, sunshiny climate. This condition is analogous to hay-fever. The administration of from three to six grains of uric acid a day will result in patches resembling eczema, which I would term the dermal analogue of coryza. Common coryza, which might be aptly called the twin of hay-fever, may itself be accounted for by the irritating action of uric acid in excess in those individuals who are constitutionally predisposed to nasal irritation.

According to Dr. N. S. Davis, Murchison, and other authorities, the poisonous effects of varying degrees of excessive uric-acid formation or retention are manifested by one or more of the following symptoms: Headache, usually most severe in the morning, and often referred to the back of the head; want of appetite; nausea and vomiting; flatulent indigestion; diarrhea; asthma; blindness; deafness; subjective noises in the ears; numbness of the skin and creeping sensations; over-sensitiveness and pain in the skin; impaired memory; melancholia; delirium; insensibility (coma); and epilepsy. Familiar examples of some of these manifestations of uremic poisoning are seen in the loss of memory, in delirium, convulsions, coma, and death from chronic nephritis.

The pertinency of these remarks will become apparent in what follows. The blood is more alkaline in the morning than at any other time of the day, reaching its point of greatest alkalinity about nine o'clock. It is more acid during active work, and the acidity reaches its highest point about midnight. The uric acid is most liable to be in excess when the alkalinity is the greatest; that is, when the blood is in the condition of a more active solvent. This alkalinity of the blood and consequent pre-

[1] The Prize Essay of the United States Hay-fever Association for 1893.

dominance of such an irritant as uric acid, following the inaction of the night and preceding the bodily activity of the day, may answer the question why paroxysms of hay-fever, asthma, migraine, angina pectoris, and other nervous disorders prevail during the early morning hours.

ANTI-URIC-ACID TREATMENT.

Mineral acids diminish the amount of uric acid excretion and alkalies increase it. Acids relieve the headache of migraine and alkalies aggravate it. Haig found that diminishing the alkalinity of the blood freed it from uric acid, relaxed the small arteries, relieved the headache and mental depression. Increasing the alkalinity increased the uric-acid excretion, contracted the small arteries, slowed the circulation, caused languor, depression, headache, and, in epileptics, a fit.

Repeated examinations show that uric acid is excreted in larger quantities in warm than in cold weather, which may account for the greater prevalence of irritability of temper, depression of spirits and suffering from headache and hay-fever during the warm months.

The deductions I have drawn are founded upon proved scientific facts, for many of which I am especially indebted to Haig and to others whom I have mentioned. In the original of this paper I have taken pains to give each investigator ample credit by liberal quotations. I am obliged to omit these and give results only. Following out their logical indications I have experimented with an acid course of treatment in hay-fever; that is, I have endeavored to prevent the blood from reaching its maximum of alkalinity and the consequent uric-acid excess between midnight and noon, knowing that if attacks were prevented during this half of the day, immunity was more likely to be enjoyed during the remaining hours. This treatment stopped the attacks. To accomplish this I have employed mineral acids, although Bence Jones states that citric acid (lemon-juice) in sufficient quantities will produce the same effect. The results of this experiment have far exceeded my expectations. So far as the experience of one experimenter goes, the anti-uric-acid treatment I have inaugurated is a success. I began with the dilute sulfuric acid, from 10 to 30 drops in a wine-glass of sweetened water two or three times a day. It should be taken through a glass tube to prevent injury to the teeth, and the less sugar one takes the better. If this should produce griping pains and diarrhea, as I have known it to do, aromatic sulfuric acid may be substituted in the same doses. I might add that this is the best internal remedy against cholera. Another remedy, the acid phosfate of sodium, is also a good nerve-tonic. It should be taken in doses of one or two teaspoonfuls in a glass of water on retiring at night and the first thing on awaking in the morning. If nasal irritation appears during the day a good dose in plenty of water should be taken. Hot water can be used if one is chilly. The early morning dose should be the largest, and it is a decided advantage to take plenty of water, for this tends to stimulate the circulation, to produce a glow of warmth and to start a free perspiration. This is a very important point, for it is the experience of hay-fever sufferers that when they have sneezed enough to get into a heat and profuse perspiration, the sneezing decreases or stops. The acidulated drink for the morning dose should be prepared at bedtime and placed within easy reach, so as to be taken at once on awaking, without uncovering.

I would request that during the season of attacks the simple and harmless acid treatment here outlined be given a fair and faithful trial, and that everyone who does so shall communicate to me the results for the benefit of all in a future publication. I do not claim that this treatment will prevent suffering from other causes than the important one against which it is given. Avoidance of all other causes and treatment to meet other indications must not be neglected. I base my recommendation of this method, aside from the uric-acid theory of hay-fever—here offered for the first time, so far as I know—solely upon the beneficial results actually obtained from its use.

By neutralizing the acid phosfate, which was my first choice in these experiments, and rendering it alkaline with soda, and thus converting it into a ready solvent of uric acid, I have been able to precipitate hay-fever attacks, and, on the other hand, I have dissipated a series of hay-fever attacks and induced the characteristic pains of gout by full doses of the acid.

Preventive treatment. The treatment thus far laid down is for the periods of suffering only, and is to be followed up by other means to prevent the recurrence of attacks by keeping the amount of uric acid in the blood down to the normal. The solvent action of salicylate and phosfate of sodium on uric acid constitutes these the best remedies for promoting the elimination of this acid from the body. Uric acid may have been stored up in the liver, spleen, and other tissues for a long time, and through improper diet and indigestion there may have been excessive formation, though Haig denies the latter proposition. I believe both theories to be correct, and in a conversation with N. S. Davis he expressed the same conviction. If the blood is rendered more alkaline it dissolves the excess of acid out of the tissues, and sweeps it out of the body through the kidneys and skin. The salicylate

of sodium should be taken for this purpose in small doses for a considerable time preceding and following, but not during, attacks. For example, if the attacks come on the 20th of August, doses of 2, 4, or 6 grains of the salicylate from one to three times a day, should be begun forty days before. As much as possible, meats, sweets, beers, wines, etc. should be avoided and the diet limited mostly to milk, fruits, vegetables, and fats, such as butter, etc. I do not insist on this rule except in severe cases, but it illustrates a diet that is less productive of uric acid. During eight years of this diet Haig was able to prevent his sick-headache, but a few days of indulgence in the prohibited diet was invariably followed by headache.

I will say parenthetically that I have obtained the gratifying results referred to without paying any attention to the question of diet. Lithia water freely taken aids elimination by converting the uric acid and the more insoluble urates into a soluble salt and stimulating the kidneys. Probably the large amount of water usually taken is an important factor.

Since writing what I have on uric acid in hay-fever, I have learned that Leflaive, of Paris, has found uric acid in great quantity just before the attack and half that quantity during the attack. In sick-headache Haig found it as 1 to 40 of urea before and after attacks and 1 to 20 or 25 during attacks. This variance is naturally accounted for by the rapid elimination of uric acid during the violent muscular exertions, profuse sweating, discharge of mucus, etc., during the paroxysm of sneezing. There are no such corresponding exertions and increase of secretions, mucus, sweat, etc., during the headache.

For local treatment patients have found much relief during attacks by using an inhaler, like that

shown in the illustration, which can be carried in the pocket, and contains a 20 per cent. mixture of equal parts by weight of camphor and menthol. It has a more soothing and correcting effect on the nerves and vessels than menthol alone. It does not become irritating, like menthol crystals, after being used for some time. It can be used unnoticed in public places the instant any irritation appears, and thus prevent or cut short attacks. Three or four slow, deep inhalations should be taken from it in one nostril, while the other is closed, until the irritation is relieved. The breath should not pass back through the camenthol inhaler, but out through the mouth instead. To treat the throat and bronchial tubes it should be inhaled through the mouth.

Medical opinions. I have written to a large number of specialists and writers on this subject to obtain their latest views and treatment. There were some whose recent publications made it unnecessary to write, and others who were inaccessible in the very short time allowed (five weeks) for gathering and transmitting this information. So I have in such cases searched the literature, and have endeavored to present a fair and impartial account of the present status of medical opinion on the nature and treatment of hay-fever. From some articles I have been unable to gather any definite knowledge of the opinions of the writers on the nature of the disease, and have stricken out much for that reason, but I have in every case presented striven to give a natural and unbiased interpretation of the author's views. The methods of treatment often indicated these. All titles will be omitted to save space, and the opinion of each writer on the pathology, whether he believes it to be a neurotic or local affection, will be indicated by a single word following his name—*neurosis*, or *local disease*.

It so happened that the first answer received in response to my letters represented the views of a large proportion of conservative surgeons in diseases of the nose and throat so fully that I give it first place in this collection. It was necessary to abbreviate it by omitting the more technical passages. It is from my good neighbor, W. E. CASSELBERRY.

Neurosis. "I believe hay-fever to be amenable to thorough surgical treatment, establishing a complete cure in a minority of cases only, those particularly which present gross deformities of the septum and the turbinates, and polypi. In the large majority the condition can be materially mitigated, the degree of improvement being in accordance, first, with the degree of structural disease present in the nose; and, secondly, with the thoroughness of the treatment. A small minority are not amenable to surgical treatment. They include the highly neurotic individuals in whose noses, between the paroxysms, little or no structural change is apparent. Much can be accomplished toward palliation by both systematic and local medicinal treatment. But in my experience medicinal treatment is nearly, if not quite, powerless to effect a permanent cure. Such, however, may take place in the course of years, perhaps, assisted by supportive and tonic treatment, as the individual's general health improves and the neurotic element lessens. Of local palliative remedies, cocain is probably the most powerful and at the same time the most dangerous remedy. Its use and sale should be regulated by law."

E. L. SHURLY. *Neurosis.* "I am very glad that you will present the subject of the treatment of hay-fever. It is a very important one, and does not receive the intellectual attention which it deserves. It is my belief that some cases can be relieved by counter-irritation in almost any part of the body, as well as in the nasal passages. I also believe that its purely nasal origin is overestimated. I have found snuff of daturin with starch sometimes more effective than the galvano-cautery." He uses tincture of iodin, etc., over the neck and chest, as recommended by Faulkner. If there are new growths he removes them.

C. H. KNIGHT. *Neurosis.* Destroys all enlargements. "When it is impossible to define a distinct abnormality, the nasal membrane throughout being sensitive and irritable, good results seem to me to follow painting the mucous membrane with a solution of perchlorid of mercury, muriate of quinin, and glycerite of carbolic acid. Of course, general treatment is always essential. I must confess that my proportion of cures is small. I feel quite pleased if I succeed in mitigating the severity of the symptoms and lessening their duration, etc."

W. C. GLASGOW. *Neurosis.* "Surgical treatment has given little or no permanent relief. Symptomatic treatment will ameliorate the symptoms and keep the patients in comparative comfort during attacks. The constitutional treatment with potassium iodid, belladónna, antipyrin, etc., lessens the disturbance and sometimes controls it."

JONATHAN WRIGHT. *Neurosis.* "I have seen several cases with no appreciable intra-nasal lesion except the acute condition during the attack. I have operated a few times for intra-nasal lesions of various kinds. All were improved somewhat, some markedly, some slightly. My impression is that the relief in these cases is too limited to make it of value."

R. W. SEISS. *Neurosis.* Operations in the nose should be resorted to cautiously, and only when absolutely necessary. He recommends strychnin and bromids internally, and benzoate of sodium, 10 to 20 grains to the ounce, or menthol, 10 to 30 grains, for a spray.

E. J. KUH *Neurosis.* A sufferer from hay-asthma. He found the most relief from the following spray: Camphor ½ part, menthol 1 part, creosote 1, oil of eucalyptus 2, oil of pine-needles 2, albolene or benzoinol 93½ parts.

J. O. ROE. *Local.* He believes that there is always a diseased condition of the nose causing hay-fever. These diseased tissues must be removed or destroyed. He denies the neurotic character of the disease. He says: "Irritation reflected from other situations to the nasal chambers is not hay-fever." (Then what is it?)

F. H. BOSWORTH. *Neurosis.* He believes that intra-nasal surgery affords permanent relief. This method is clear in its indications, easy of accomplishment, and promises not only more immediate but more permanent relief than any other method. He believes that hay-fever and spasmodic asthma are pathologically identical.

J. N. MACKENZIE. *Neurosis.* Better results were obtained from constitutional than from local treatment. He gives zinc, nux vomica, quinin, and arsenic.

W. H. DALY. *Local.* He thinks it is simply a deformity in the nose and that a large proportion of cases can be cured by surgical operations.

J. SOLIS-COHEN. *Neurosis.* Any local nasal trouble may be simply incidental. He prescribes tonic treatment and restricts the use of meat.

H. GRADLE. *Neurosis.* He removes any nasal growths.

KITCHEN, of New York. *Local.* He believes it is due to the membrane being deficient in the epithelial covering, etc., that calls for local remedies.

B. O. KINNEAR. *Neurosis.* He believes it to be due to irritation of the gray matter composing the centers of the fifth, glosso-pharyngeal, the facial nerves, and some of the pneumogastric. He found that treatment addressed to this condition was successful. He used the well-known ice-bags of J. Chapman, of Paris, along the spine between the shoulders, from the fourth cervical to the third dorsal vertebra, to dilate the arterioles of the whole body, thus evenly distributing the circulation and withdrawing the blood from the congested centers. The applications lasted from 60 to 90 minutes, 1 to 3 times a day.

E. F. INGALS. *Neurosis.* About 40 or 50 per cent. of cases may be cured by cauterization. He has modified his views of eight years ago, when he thought that nearly all could be cured by burning. He gives tonics, and cocain locally.

M. R. BROWN. *Neurosis.* The supersensitive areas should be destroyed with the cautery. Atropin, $\frac{1}{100}$ grain, once or twice daily, or a 4 per cent. solution of cocain locally may give temporary relief.

H. H. CURTIS. *Neurosis.* He sears the enlarged tissues with chromic acid in preference to all other escharotics.

C. E. SAJOUS. *Neurosis.* He believes that if cauterization fails to cure, it is because it is not carried deeply enough. He uses glacial acetic acid, or nitric acid. He gives strychnin and coca wine after meals.

WILLIAM CHEATHAM, of Louisville. *Neurosis.* He praises antipyrin in 10 to 30 grains, also acetanilid, 4 to 6 grains a day.

T. M. HARDIE. *Neurosis.* He believes that operations will benefit a large proportion, but constitutional treatment is necessary in most instances.

J. R. DAVEY. *Neurosis.* He removes enlargements and gives potassium iodid and tonics.

BEVERLEY ROBINSON. *Neurosis.* He uses soothing applications and constitutional medication. He advises against surgical interference except when there are positively diseased growths.

I. GLUCK. *Local.* He believes the nervous element to be a result, instead of the cause, of the disease. He uses a 10 per cent. solution of atropin after anesthetizing with cocain-phenol. He gives aconitin every hour or two, affording relief and aborting attacks in from two to five days.

CARL SEILER. *Neurosis.* He uses sprays of

cocain and plugs of cotton saturated with it. A sponge worn in the nose to filter the air is recommended. Quinin in large doses is advised and tonics and atropin for the fever. In the later stages iodid and bromid of sodium are given. Morphin hypodermatically is advised. All enlargements should be removed; he gives dilute phosphoric acid —30 drops a day.

DE LAMALLEREE. *Neurosis.* He believes it a neurosis of nasal origin, and claims to subdue morbid sensitiveness of the membrane by douches of carbonic acid gases locally for fifteen minutes at a time, three times a day.

SIR ANDREW CLARK. *Neurosis.* He resorts to constitutional remedies and applies to nostril with a camel's-hair pencil this mixture: 1 ounce each of glycerin and carbolic acid, 1 dram of quinin, and $\frac{1}{1000}$ part of perchlorid of mercury. Heat must be used to dissolve the quinin.

P. MCBRIDE. *Neurosis.* He treats it as a nervous disease, and if this fails he uses cocain and the galvano-cautery. He deprecates indiscriminate burning, however.

D. B. LEES. *Neurosis.* He claims to abort it with bromid and belladonna.

GOUGUENHEIM. *Neurosis.* He uses nervines and cocain locally.

The writer of this paper operates with the galvano-cautery or by other methods when there are positive indications for such measures.

The limits of this essay having been reached, all remarks of a generalizing character on this array of medical evidence will be omitted.

DEATH IN THE NILE.[1]

BY DR. GREENE PASHA,
OF KNAPHILL, SURREY, ENG.

As blood is the life of man, so the river Nile is the life of Egypt. While the first remains thin and wholesome, circulating freely throughout every organ and member, and capable of self-purification by reason, in a great measure, of its rapid motion, the fortunate possessor enjoys good health; but if from any cause, inherent or acquired, the flow of the vital fluid be retarded, and the faculty of getting rid of effete and poisonous material be thereby interfered with, he will sicken and die.

This is equally true with regard to the river. As long as the current continues sufficiently powerful to sweep away impurities—before there is time for them to develop their lethal properties—the people thrive; but no sooner does stagnation, however brought about, set in, than at once the death-rate becomes an index of the degree of fouling the water has undergone, the extent of the pollution which the current can no longer cope with.

The reason for the annually recurring holocaust in Egypt is writ so plain, that he who runs might read; but such is the power of habit, so inveterate is the apathy attendant on custom, that no attention whatever is paid to a condition of things as disgraceful as it is lamentable. The foul fiend of usage has blinded the eyes of those in whose hands is the remedy, and no one in authority will endeavor to set right what prejudice will not allow him to acknowledge as a wrong.

In Egypt there is no water, potable or the reverse, except the stock supplied by the Nile. There is not a single natural spring in the whole country. So-called springs and wells are fed by infiltration from this wonderful river, which drains a surface as extensive as Russia, and for the last 1200 miles of its course receives no affluent whatever, great or small. A glance at a map of Egypt, as now constituted, will suffice to show that the population is truly riparian; the seven or eight millions of inhabitants all dwell within easy reach of the Nile, including its branches and canals, and nine-tenths of the putrescible filth they produce are cast into its bosom.

This is of course abominable, but the reprehensible practice has now gone on for so long that the desecration of the sacred stream is no longer looked on as a sin by the, in this respect, unworthy descendants of the most hygienic nation of antiquity.[1]

When it is considered that the fall in the bed of the river from Assouan to Cairo is only between two and three inches per mile, and that throughout the Delta even this infinitesimal slope diminishes to less than one inch per mile, it will readily be perceived how easy it must be to bring about stagnation during the low-Nile season. It is the custom at that time to bank up the water in hundreds of impure reaches, for the sake of the crops. The fields must be watered or the revenue could not come in; irrigation has to go on *quand même;* but the current, already well-nigh moribund from natural causes, soon dies outright.

[1] [The author was seven years head of the Egyptian Sanitary Department, and obliged to retire by sudden and total deafness. —ED. MEDICAL NEWS.]

[1] "The ancient Egyptians had two chief gods—Horus and Ammon. The first was usually depicted as the sun; the second was the spirit of the Nile. While worshipping and respecting these gods, as represented in their incarnations, Egypt was supreme and conquered the greater portion of the known world; but in these degenerate days your beautiful country is no longer mistress, and you may seek the reason in the scorn and contempt with which both these deities are treated. The utmost efforts are everywhere made to exclude the life-bestowing sun, and his attendant, air, from dwellings; and no filth is too foul to cast into the great life-sustainer, the sole water-supply of Egypt—the Nile!"

This quotation is taken from a letter written in September, 1890, by the Director of the Egyptian Sanitary Department to the minister who was then, and is still, at the head of affairs. It speaks for itself; and if no extract from the answer be appended, it is for the simple reason that none was received. The document, most probably, was never even read, and no doubt it was promptly consigned to that very capacious receptacle, the ministerial waste-paper basket.

No sooner has this regrettable but under the circumstances inevitable result taken place than the water begins to emit a nauseous smell, and on still days an iridescent scum may be seen covering its surface as though petroleum had been poured upon it.

Vital statistics in Egypt are not so perfect as in Europe or America. The officials of the Sanitary Department do what they can to collate trustworthy records, but they are terribly handicapped for want of a census. In 1882, during Arabi's so-called rebellion, an attempt was made to establish an enumeration of the people, but it was practically mere guesswork; and for all scientific purposes the pretentious volume in which the results are tabulated is absolutely without value.

The rates shown in the accompanying table cannot therefore be accepted as really representing the mortality in the various towns; but the figures serve for the purposes of this paper, as they demonstrate with the utmost clearness the extreme unhealthiness of communities drinking Nile water during the summer, and the relative salubrity of the two towns where alone the people are compelled to store up the pure flood-water in cisterns, or as they are called locally, *sahariqs;* their proximity to the sea rendering the river brackish when its level falls.

The table is almost self-explaining; a few remarks only are necessary to bring out the special points. The four weeks ending about the 2d or 3d of April may be considered the commencement of the low-Nile season, for at the end of the period there is usually very little current left. The river generally begins to rise in the early days of August, but a week or two naturally elapse before any improvement appears in the death-rate. It will be seen that the average mortality for the five years in the ten towns using water direct from the river or canal was in every case higher at the end than at the commencement of the season, the average rate of increase being equal to 53 per cent. Taking the towns, year by year, it appears that this phenomenon was observable forty-two times out of a possible fifty; and it is worthy of remark, though not shown in the table, that in the same towns the deaths exceeded the births during the low-Nile period thirty-eight times in the five years, whereas at Damietta and Rosetta the births were invariably far the higher.

These facts ought to be sufficient to convince most people that the water of the Nile becomes poisonous during the summer. But there is, unfortunately, still stronger evidence. In 1891 a canal on a higher level than the river was opened to Rosetta, and, for the sake of economy, the public *sahariqs* were allowed to remain empty. The con-

TABLE SHOWING THE RELATIVE MORTALITY IN EGYPTIAN TOWNS WITH AND WITHOUT SAHARIQS, TOWARD THE COMMENCEMENT AND AT THE END OF THE LOW-NILE SEASON.

N. B.—The rates are based on the census of 1882, which is notoriously incorrect, but the relative values are trustworthy.

DEATHS PER 1000 PER ANNUM.

Years.	Periods of four weeks ending respectively 22, 21, 19, 18, and 17 April.												Periods of four weeks ending respectively 12, 11, 9, 8, and 7 August.											
	Towns not using Sahariqs.										Towns obliged to use Sahariqs.		Towns not using Sahariqs.										Towns obliged to use Sahariqs.	
	Guisch.	Cairo.	Mansourah.	Alexandria.	Damanhour.	Tantah.	Mehallah.	Chibin.	Zagazig.	Port Said.	Damietta.	Rosetta.	Guisch.	Cairo.	Mansourah.	Alexandria.	Damanhour.	Tantah.	Mehallah.	Chibin.	Zagazig.	Port Said.	Damietta.	Rosetta.
1886	58	47	33	46	42	58	26	19	59	22	21	18	54	56	88	62	63	73	77	79	33	54	22	23
1887	44	43	32	44	25	36	33	32	35	42	25	36	47	53	55	45	38	57	30	58	53	36	21	13
1888	62	40	46	38	32	28	27	18	36	21	15	14	58	83	68	59	38	79	43	53	59	48	28	15
1889	42	50	30	56	31	50	25	40	49	26	33	16	70	66	58	53	69	81	50	100	43	80	21	16
1890	45	42	60	40	32	40	41	36	36	29	19	19	53	50	49	46	36	60	42	50	49	40	20	12
Aver.	50.2	44.4	40.2	44.8	32.4	42.4	30.4	29.0	43.0	28.0	22.6	20.6	56.4	61.6	63.6	53.0	48.8	70.0	48.4	68.0	47.4	51.6	22.4	15.8
											Rate of *increase* per cent.		12.3	38.7	58 2	18.3	50.6	65.0	59.2	134.5	12.3	84.2	...	...
											Rate of *decrease* per cent.		...	...	...	...	...	...	...	...	...	...	0.8	23.3

sequences were simply disastrous. The ancient port, so long renowned as the most salubrious town in Egypt, at once fell from the post of honor, and ever since has occupied a position in the sanitary returns only a little higher than the average. The low-Nile season, which used formerly to be the healthiest part of the year, is now marked by the rise in mortality customary elsewhere; and the fatal influence of the deadly canal is also amply demonstrated by the unprecedented fact that the deaths now habitually exceed the births during the summer.

The reason the annual slaughter excites so little attention is because it is only the children that die. The innocents perish, but the withers of the adults are unwrung. In their infancy they pass through the ordeal, and are now immune to the effects of the poison.

It is as true of nations as of men that in their affairs "there is a tide which, taken at the flood, leads on to fortune." In the lives of peoples there are occasions when the events depending on prompt decision and prudent selection are of such incalculable importance, not so much perhaps to themselves as to their posterity, that vacillation and ignorant action at the critical moment are alike fatal. As a rule, the march of events in a country is a jog-trot affair, allied to the goose-step, and devoid of salient incidents to serve as landmarks for time; but now and again the level sequence of monotonous days is dislocated, and opportunities offer which, if neglected or misused, conduce eventually to ruin.

A crisis of this nature is now at hand in Egypt. It has nothing to do with politics, properly so called. It is not a petty ephemeral question such as the fall of a cabinet, to be invested with exaggerated interest one moment and forgotten the next. On the contrary, it is a real, solid question; one directly affecting hundreds of thousands of lives, and indirectly enormous sums of money. There ought not to be any doubt which of these two things—life or money—is of most importance; and yet it must be admitted that were not filthy lucre mixed up in this matter, there would be but little prospect of its ever attracting aught but an infinitesimal portion of public attention.

The question, shortly, is this. In February, 1894, an International Commission is to meet in Cairo to consider plans that will be submitted to it for increasing the supply of water furnished by the Nile during the three or four months when, its level having fallen, the current almost ceases. To most people this at first sight might appear to be merely a detail connected with irrigation, to be determined by engineers specially trained in that branch of their profession; but though, no doubt, irrigation is a subject of great importance in an arid, rainless climate, still it pales into insignificance before what in reality is the vital point, the very essence of the matter with which the Commission will have to deal.

For the purpose of watering the land in order that crops may grow, any water will suffice; in fact, the fouler it is the better will be the result. But when, at the same time, the drinking-supply of a people is concerned, the question of purity should take precedence of every other consideration.

The projects to be considered by the International Commission are practically two in number. One, which seems to be favored by the powers that be, consists in "ponding up" the river in its own bed at one, two, three, or more places, including, according to Mr. Willcocks, "poor and uninteresting" Philæ. The other project is that of Mr. Cope Whitehouse, in the Raiyan desert.

To a sanitarian the river ponds are absolutely indefensible. In the first place, the pure Abyssinian mountain water would all be allowed to flow through before the ponding-up began. The sluices would not be closed till January in each year, and the slowly-filled ponds would consequently owe their supply to the fever-stricken swamps of Central Africa. During its detention behind the barriers there would be ample time for the countless germs contained in this water to develop and come to maturity, and in this natural process they would receive the assistance of the putrescible matter continually being cast into the stream from Khartum downward.

There is not a single good word to be said in favor of the ponding-up scheme. Were no other plan available, the favored project might be accepted as a *pis aller*—as a palliative better than nothing at all; but it never could be looked on as a remedy for the evils exposed in the preceding remarks. It would be a sign of insanity if a starving man were to deliberately choose a broken fragment when he was offered an entire loaf, and yet this is practically what will be done if the ponding-up project be accepted.

In the Raiyan desert, far from all possibility of contamination, there is a vast hollow where the cream, so to speak, of the Abyssinian flood can be stored till required for use. Then let this be done! In the interests of poor humanity let us see all petty jealousies cast to the winds. Then will Egypt be indeed blessed with the most perfect scheme that has ever been proposed for her rehabilitation. It might, and ought to, have been carried out years ago; but better late than never. The critical moment has arrived, and on the decision of the Commission now depends, not only the prosperity, but the very lives of a hard-working, admirable people.

TREPHINING AS A CURE FOR TRAUMATIC EPILEPSY.[1]

BY JOHN T. CHAPMAN, M.D.,
OF BESSEMER, ALA.

IN these days of venturesome exploits in the fields of surgery, no greater boldness is perhaps displayed than when we propose to invade the very domain of thought and trespass upon her territories in search of disease. The temerity concerning the legitimacy of such encroachment has created adverse opinions as to the value of the operation of trephining for the cure of traumatic epilepsy. It is true that the proper knowledge of function-localization, when the operation was performed without success, was a prime factor. I wish to put myself on record that no one should undertake to trephine unless he understands the symptomatic localization of such lesions. It is true that trephining has been employed from the earliest times, and that the dura has been incised in many cases by older surgeons, but not until the nineteenth century has attention been directed to cerebral localization and to certain surgical procedures founded upon the indications that it has afforded. Such operations upon the brain have been conspicuously successful, and have been justly reckoned among the triumphs of modern surgery. When guided by the disclosures of pathology and physiologic experiments, and aided by the application of recognized aseptic laws, operations upon the brain have been devised and successfully executed, which in the immediate past would have been not only impossible but incredible; but it is equally true that these operations are still limited in number and application. The instances in which brain-lesions can be accurately defined and located, and afterward made subjects of operation with success, are comparatively infrequent.

The lesions that are of such nature, so well-defined and outlined, or so situated, in view of the demonstrated localization of brain-functions, that their diagnosis can be made with reasonable certainty, are few enough in the first instance; those that are in reach of the surgeon's knife are fewer still, and those in which the patient ultimately survives constitute but a small portion of the original scanty number. It is not strange, however, that these operations should fascinate by their audacity, and that when successful they should dazzle the modest workers in the more prosaic fields of labor.

It is also possible that the order with which the diagnosis of local lesions of the brain has been pursued, in the light of functional localization, may tend to distract from those general pathologic conditions that are of so much greater frequency.

[1] Read before the Southern Surgical and Gynecological Association, November, 1893.

It is just here that we must recall the property inherent in the cells of the cerebral cortex of manifesting, under the slightest stimulation, the phenomenon of automatonism, and often spontaneously; this is an important biologic condition of the cortex. It explains how contraction of the epileptiform convulsive nature may for a while persistently recur, even though the primary cause that obviously excited the true epileptic paroxysm—such as a piece of depressed bone, a tumor, or a clot—has been wholly removed. Manifestations that at first depend upon the advent of afferent impressions may afterward continue irregularly to emanate almost spontaneously from cortical centers that have been excited, from some eccentric source, to abnormal activity through long-continued, frequently-repeated vehement impressions. Through inter-cortical connection more than one center may participate in radiating the afferent impulses far beyond the special motor area primarily involved; while the primitive diseased focus itself continues to accumulate cell-force that is irregularly, but often paroxysmally, dissipated. Increment of energy doubtless depends upon the very metabolic tissue-changes that have occurred through hyper-nutritive processes in the nerve-substance or nerve-protoplasm, changes that for a period are all-sufficient and quite prone to keep up those automatic explosions. But let us for a moment suppose these automatic centers separated or cut adrift from all afferent influences; then, the usual source of normal stimulation being removed, all excitor-reflex expressions will wane away into undulation, slowly diminishing in frequency and vehemence until, coming gradually to a standstill, they gradually disappear.

Now from this physiologic view of the spontaneous intrinsic life-history of the brain, I feel prepared to maintain that when no disorganization of the cortex has yet taken place, surgical interference at the seat of injury with the trephine-elevator, or rongeur forceps, must assuredly cure the patient, as we release the cortex from all direct or threatening source of irritation. Let no recurrence of convulsive attacks particularly disconcert us; even should these nerve-symptoms continue for awhile, nay, even for a year, diminishing in intensity, experience has more than once shown that we may often look forward to a cure, but frequently still to amelioration of the symptoms in the nature of the paroxysm. I believe that if the record of cases of trephining for the cure of traumatic epilepsy were postponed until time rectified our misconception respecting them, we should realize more frequently the accuracy of this assertion. D. Hayes Agnew, in an article on the "Present Status of Brain-surgery," concurred with Mr. Horsley, that it was not proper to call a patient cured until five years after operation. This is just; but Agnew further adds that traumatic epilepsy is practically incurable

by surgery, and that a considerable number of such cases had better be relegated to the domain of medicine. Is it a wonder that we should hesitate to enter the domain of thought and trespass on her territory in search of disease when we have such authority relegating it to the domain of medicine? And yet, in spite of this, clinical experience has taught us otherwise.

Since the advent of aseptic methods, trephining may be regarded with less apprehension by the timid. Its propriety may now be decided simply in view of its probable advantage, or its more probable futility. It may be counted quite as safe as the use of the exploring needle in suspected abscesses, and safer than exploratory celiotomy. So far as subsequent danger or inconvenience from hernia cerebri is concerned, I may report with Horsley that in the surgery of to-day it has ceased to be an intimidation to the surgeon.

I believe this operation should be performed in every case of depressed fracture, when elevation and thorough exploration cannot otherwise be accomplished. It is doubtful if such operations (unless from want of proper knowledge of cerebral localization) have been known to do harm when they have failed to do good. It is certain that harm has come in more than one instance, when, because of general symptoms, operation has been neglected. It is impossible in recent brain-lesions to say what extensive comminution of the internal table may not exist. It is the possibility of the smallest bony spicula penetrating the brain and causing serious nervous disturbances in the indefinite future that demands the thorough examination of every cranial fracture. It should be held obligatory on precisely the same ground as the examination and cleansing of the external soft parts. The observance of such precaution is free from danger; its neglect may lead to either present or future serious complications.

We are prepared, then, to say that, in interfering surgically for the relief of epilepsy, we have encountered no peripheral source of trouble in any morbid condition that has confronted us. It is our duty from present enlightenment on the subject to determine, if possible, the brain-territory that disease oppresses, and to reach the disease before we hasten to declare that the trephine has discovered no disease, and proved powerless to relieve. A question aptly suggestive in this connection at once arises, whether indeed bold invasion of the diseased or supposed diseased province of the brain itself should constitute a legitimate step of the operation? If we are not to stop short of the successful fulfilment that the operation proposes, I unhesitatingly reply in the affirmative, of course qualifying this answer by an assurance that the distressed centers have been satisfactorily ascertained by the symptoms present and by application of electrodes with proper precaution. It is true that the procedure has not always been satisfactory, but it seems to be the rational course. One of the most impressive illustrations of what I have tried to show, trephining as a cure for traumatic epilepsy, is a case reported by Michael. I cannot forbear detailing this case.

More than forty years ago a lad of fourteen years of age, living at Charlotte, N. C., was kicked by a horse on the right side of the forehead, remaining unconscious several days; the frontal bone was fractured and depressed, and escape of pieces of bone kept the wound open for one year; cephalalgia interrupted his collegiate course, which he ultimately completed. Convulsions declared themselves later on, daily augmenting until his memory and general health became sensibly impaired. The fits, in number and violence, were so great that on one occasion he fell out of bed and dislocated his shoulder. He was operated on, an inch-and-a-half button of bone being removed at the seat of the injury. It presented on its cerebral surface an osteophyte an inch in length, adherent to the dura, which, when raised, exposed a visibly large absence of brain-substance involving the supra-frontal, mid-frontal, and sub-frontal gyri. Convulsions occurred the day after operation, and were repeated with singular vehemence for weeks. The tormenting headaches and mental decadence seemed ameliorated, however, though for months afterward epileptic attacks hopelessly depressed him. This operation was performed in 1855. The boy returned to his home eight years afterward. Michael, unexpectedly saw him again while he was serving, completely relieved, in the ranks as a private soldier and undergoing all the hardships of the tented field.

I operated on a boy, fourteen years old, who some three years previously received an injury of the head by a blow fracturing the parietal bones; three weeks after the injury he began to have epileptic convulsions; at the time I saw him the convulsions had become more frequent and more violent; the day before operation he had six such seizures. Two buttons of bone were removed at the seat of injury; there was considerable pressure from depressed bone; the membranes were hard and indurated. The indurations were cut out and the edges of the dura brought together by continuous catgut suture; drainage and dressing were aseptic. The wound healed almost by first intention. For two months after the operation the boy continued to have convulsive seizures, but they gradually decreased until they stopped four years and a half ago. He is now eighteen and a half years old, weighs one hundred and seventy pounds, and is working in a foundry where the temperature ranges from 110° to 120° F.

In conclusion, let me add that the doctrine that depressed fracture of the skull without symptoms requires no operative interference, a doctrine which in the past has been deeply rooted in the professional mind, I hold to be responsible for many, very many,

of the unfortunate sequels of head-injuries. However small may be the depression that follows a fracture of the cranium, save in one or two locations, it will encroach enough upon the dura to cause more or less irritation; though insufficient at first, and not at all recognizable to the consciousness of the patient, yet eventually that irritation will be propagated to the meninges and ganglia until finally the paroxysmal explosion occurs, and then, even when the initial lesion is removed, the slowly-established habit created by years of excitation will for some time remain. No amount of foresight can determine what will happen to the inside of the skull after the reception of an injury, from inspection of its exterior surface, the physiologic properties of the two being so very unlike. Whenever, therefore, in my judgment, the profession can accept the doctrine that all depressed fractures of the cranium, however slight may be the depression, are, entirely independent of pressure-symptoms, proper subjects for trephining, then will traumatic epilepsy largely disappear from the list of surgical diseases.

SOME INDICATIONS FOR AMPUTATION OF THE LEG.

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IN presenting the subject of amputation of the leg, I do not desire to convey the impression that I consider what I am about to say as in any degree essentially new, but rather to emphasize certain indications that seem to call for amputations of the leg other than those most commonly found in works on surgery.

1. I consider any injury to the foot, so severe as to permit only of a Pirogoff, a Symes, or a Chopart amputation, to be an indication for amputation of the leg in the lower third.

2. Tuberculosis of the tarsal bones, except in children, should, with few exceptions, be regarded as an indication for amputation of the leg in the lower or middle third.

3. Those extensive wounds and burns of the soft parts in which large portions of the integument and soft parts are destroyed, leaving the bone covered only by an extensive and tender cicatrix, demand amputation.

4. Senile gangrene of the toe or foot demands amputation of the leg or thigh above the bifurcation of the popliteal artery.

5. Shock, dependent upon a severe injury to the leg, when it is obviously impossible to save the limb, should, if reaction do not take place in a short time, be an indication for immediate amputation.

The first indication, that in which a Pirogoff, a Symes, or a Chopart amputation might be performed, is one which has been forcing itself upon the profession with increasing strength from year to year.

The destruction of the arch of the foot, the uncertainty of obtaining useful stumps, the inability satisfactorily to adjust mechanical substitutes for the portion lost after either of these operations, seem to me to justify our recommending an amputation at this time, rather than to be obliged to see our patient forced to rely upon crutches, unsatisfactory and awkward substitutes for the foot, and most likely to undergo an amputation before he can have fitted a limb at all useful or comfortable.

That amputation for suppurating tuberculous disease of the tarsal bones in adults will not be accepted by a great many as an indication for amputation of the leg, I am well aware, and yet the treatment of this disease has been so uniformly unsatisfactory that I believe it should be considered an indication in most cases for amputation, rather than to allow the patient to continue with a practically useless foot, or to run the well-established risk of general tuberculous infection.

We have all, perhaps, seen those extensive wounds of the soft parts of the leg and foot in which cicatrization has been eventually complete, and yet in which, owing to extreme sensitiveness, or to the repeated occurrence of large and intractable ulcerative processes, amputation has been rendered necessary after years of suffering, or of disability. In those cases in which we can foresee such a result, we should not let the importunities of the patient to save his leg blind us to the ultimate consequences, or to the propriety of advising amputation, and then allowing the patient to take upon himself the responsibility of the future. I am well aware that I am trespassing upon debatable ground when I advocate amputation of the leg above the bifurcation of the popliteal artery in senile gangrene below that point, but I feel sure that by its early performance the patient has a better cha ce for life and usefulness, suffers less pain, and runs less risk of septic poisoning than by that method that tells us to fold our hands and wait for the line of demarcation to form.

It is doubtful whether my last indication for amputation should technically be enumerated here, but what I wished particularly to call attention to was, that a patient suffering from severe shock as the result of a crush of the foot or leg, and who fails to react satisfactorily after not to exceed half an hour of intelligent efforts directed toward restoring the circulation and body-heat, will, if he be not in a moribund condition, stand a better chance of recovery with an immediate amputation than by delay. Reaction will not be delayed by the operation, but the continued presence of a crushed and mangled limb will rather tend to perpetuate shock and render

sapremia and septicemia more probable than a prompt and bloodless removal of the part

In presenting for consideration these indications for amputation, I have, for various reasons, purposely avoided referring to statistical evidence. Statistics, especially medical and surgical statistics, are capable of so many opposite interpretations, that they are often not only capable of carrying erroneous impressions, but may be absolutely dangerous. Nor have I related cases illustrative of the various propositions stated, though I have considerable material for such illustration. I have rather preferred to state them briefly as the result of my clinical experience, satisfied that had I appreciated them fully at an earlier date I might have saved much suffering, and I believe a few lives.

I trust that if any feel called upon to criticise these indications they will do so, using as a base their clinical experience, and not statistical compilations.

ORIGINAL LECTURE.

CONGENITAL PTOSIS—TRAUMATIC PARALYSIS OF THE LEG—NEURITIS FOLLOWING INFLUENZA—SPASM OF MUSCLES OF THE FOREARM, WITH TROPHIC CHANGES.

By HAROLD N. MOYER, M.D.,
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PTOSIS PALPEBRÆ SUPERIORIS CONGENITA.

THE patient presented to you to-day shows a most striking deformity. As you look at his face you notice that the upper lid of the right eye droops, so as to conceal almost the whole of the iris. The little fellow is but eighteen months old, and is, as you see, remarkably strong and well developed for his age. The mother tells us that he is her fourth baby, and that her confinement was easy, labor lasting but one hour; a midwife was present, and no instruments were used; the head presented.

Immediately after the birth of the child it was noticed that the right upper eyelid drooped so as to cover the pupil. The mother states that the child has always been well, never having had any of the usual children's diseases. Inquiry into the family history shows no trace of hereditary disease. The father denies venereal infection. It is apparent that both parents are exceptionally healthy and robust people.

The patient resists so strongly that it is quite difficult for us to expose the iris in such a way that we can observe both eyes. Of course, without the assistance of the patient it is difficult to say that they are parallel, but they appear to be so. The pupils react quickly to light and accommodate to distance. It is apparent, therefore, that we have here only a paralysis of that branch of the third nerve supplying the levator palpebræ.

This is one of the congenital third-nerve paralyses, which, while they are not common, are still referred to in all standard text-books on nervous diseases and ophthalmology. It is peculiar in this case that the disease is unilateral, and that it involves but one branch of the superior division of the third nerve, that which passes to the levator, while the portion that supplies the superior rectus has entirely escaped. In all former cases of congenital ptosis that have here come under our observation, the disease has been bilateral, and there has usually been some involvement of other branches of the nerve, with consequent squint. Unilateral cases of this disorder, in which the eyelid would rise when the mouth was opened, have been reported by Helferich, Gunn, and Bernhardt. In the case reported by Gunn, it it was not only necessary to open the mouth, but also to carry it a little to the right.

So far as our present knowledge goes, we know nothing of the nature of this affection. It may be due to pressure upon the nerve during the birth of the child, or to some imperfection in the nervous apparatus, or perhaps to absence of the levator muscle. Whatever its cause, we must look to operation for its relief, and this consists in removal of a portion of the integument from the upper lid so as to shorten it so that the natural position of the eye is open, but the orbicularis is still able to close the eye. A later operation, and one quite popular, is to pass threads beneath the skin and bring them out above the eyebrow. In this way artificial bands of connective tissue are formed so that pulling the brow upward moves the lid.

TRAUMATIC PARALYSIS OF THE LEG.

The patient before you came into the room on a pair of crutches, with the left leg supported by a strap caught under the heel of the left shoe, and across the front of the thigh. He states that he is thirty years of age, and by occupation a railroad conductor. The family history is good, and prior to the accident the man's health has always been good. Venereal infection is denied.

The accident in which he was injured took place some four months ago. The car in which he was riding was thrown down an embankment some ten or fourteen feet, and he was precipitated with great violence toward the opposite side of the car. He does not know just how he struck. He thinks that he did not lose consciousnes, but was not able to move or speak. He was immediately given some whiskey, which made him cough, and this brought up some blood. After about an hour he seemed to gain a certain control of himself, and then began to experience very severe pain across the small of the back. This has continued until the present time, though it has been getting better, and it now rarely annoys him, except when he wrenches the back in some way. He remained in substantially the same condition until removed to a hospital, where it was necessary to draw his urine with a catheter, and clysters were used to move the bowels. It was noted at that time that his left leg was cold, and hot bottles were placed about it. These were too warm, and the leg was blistered without his knowledge, as sensation was completely abolished in the part. There has been some improvement in his general condition. The pain has to a great extent disappeared, and he is now able to go about on a pair of crutches, but since the accident he has never had the slightest voluntary use of the left leg. Two weeks after the injury he was able to pass water. His general health is now good.

Examination does not show the slightest deformity of the back, pelvis, or thighs. There is complete loss of sensation from a line drawn parallel with and about two inches below Poupart's ligament in front and two inches below the gluteal fold behind. Below this the senses of pain, touch, pressure, and temperature, are absolutely lost. The leg is blue and cold to the touch, and pits slightly on pressure. The patellar tendon-reflex is exaggerated in both legs, but there is no ankle-clonus. There were no ocular or oral symptoms, and motility and sensation of the upper extremities are normal. The reaction to the faradic current was slower, and required about twice the coil-distance to produce a muscular movement on the left side that was needed on the right. No galvanic reactions could be obtained in the left leg. In the right leg, C.C.C. 5.5, A.C.C. 7.5 milliampères, with about a normal faradic irritability.

As to the nature of this injury, we can only think of a hemorrhage into the spinal canal or into the cauda equina. There is one anomaly in the symptom-grouping that is found in the presence of the deep reflexes associated with trophic disturbance and the reaction of degeneration. This would almost seem to exclude the hemorrhage or other lesion of the cauda. If we assume that the lesion is in the cord, we are met with the fact that sensation and motion are both paralyzed, which would imply that the difficulty affected both sides of the cord. Perhaps in lesions of the lumbar cord there are sections in which the sensory and motor paths are associated on the same side of the cord. In any event, the retention of the deep reflexes in such a case cannot be explained by the ordinary views of the anatomy of the lower portion of the spinal cord.

NEURITIS FOLLOWING INFLUENZA; NEURASTHENIA; IRRITABLE PROSTATE.

This man is thirty years of age, has been married for six years, and has no children. Eleven years ago he contracted syphilis. He was perfectly well until the winter of 1890, when he had an attack of influenza that left him with a pain which is described by him as most severe at the lower portion of the sternum, radiating from this part downward and to the left, to a point some two inches below the left nipple. The pain was very severe at first, and as it was thought to have some connection with the specific trouble, he was given mercury with iodids. This relieved the pain, and he was free from it for about one year, after which it returned, and it has persisted with greater or less severity ever since. With the return of the pain specific treatment was again employed, but it failed to give relief. The pain varies somewhat in severity; at times it is very sharp, but he says that a dull ache is always present in the part. It is aggravated by deep breathing and by pressure.

The general condition of the patient seems to be fair though he is of markedly nervous temperament. His bowels are regular, appetite is fair, and sleep good. As he stands with eyes closed and feet together, there is a marked tremor of the upper eyelids. The deep reflexes are a trifle exaggerated, both of which symptoms are commonly present in neurasthenia. There are no other general nervous symptoms. On the anterior aspect of the left side of the chest there is an area of anesthesia corresponding with the distribution of the seventh and eighth intercostal nerves. Carefully palpating the intercostal space with the rubber tip of a lead-pencil reveals two tender points in the course of the seventh nerve, and one in the course of the eighth. We think from these symptoms that we are justified in making a diagnosis of intercostal neuralgia, probably dependent upon neuritis which came on at the time he had the influenza, and which is in no way connected with the specific trouble. It is well to remember that while this pain may be due to neuritis, it is found in a marked neurasthenic, one of a class of patients especially liable to pains without organic changes in the nerves.

In addition to these other symptoms, the man complains of occasional pain in the head of the penis, radiating to the root of the organ. The urine, which is passed freely, contains a few clap-threads (Ripper-fäden). There is no disturbance in micturition. Exploration with olive-tipped sounds does not show any narrowing of the canal, but sensitive points are found at the neck of the bladder, and one or two inches in front of it. Rectal exploration shows the prostate to be of normal size, but very sensitive. The absence of organic changes in the urethra and prostate leads us to regard these conditions as a local expression of the general neurasthenic state. While we are confident that with a healthier nervous system there would have been no local disturbance at the neck of the bladder, we shall not neglect the latter in our treatment, but will use a mild injection of nitrate of silver (2 per cent.) in the deep urethra. We shall expect this treatment to favorably influence the local symptoms. The constant galvanic current will be applied to the intercostal nerves with the positive pole over the terminations of the nerves and the negative between the shoulder-blades. From eight to twelve milliampères will be used for about ten minutes each day. The current will be turned on and off slowly, and all interruptions avoided. Strychnin will be employed internally in doses sufficient to produce its full physiologic effect.

SPASM OF MUSCLES OF THE FOREARM, WITH TROPHIC CHANGES; TREMOR OF THE TONGUE.

This patient is thirty-four years of age, a machinist by occupation, married for the past eight years, and has four healthy children. Fourteen years ago he contracted syphilis—at least he had a chancre which was followed by a suppurating bubo. He does not think that he had an eruption on the skin, but states that he had falling out of the hair some weeks after the primary sore. From that time until six months ago he had perfect health, was then working at his trade, and was employed eighteen hours a day, when he noticed a twitching in the throat and some impairment of speech. His physician regarded these symptoms as being due to bulbar paralysis of specific origin, and gave him potassium iodid, under which treatment the symptoms improved, though he did not entirely recover. Some two months ago he was seized with violent contractions of the muscles of the left forearm. These continued to grow rapidly worse until the present time. They were not attended by pain, and the patient has been able to continue at his work until within a few days, since which time a severe inflammation of the metacarpo-phalangeal articulations of the first and second fingers has developed. The constant move-

ment of these joints by the spasms in the muscles causes much suffering, but aside from this there has been no pain.

His present condition is good, his appetite excellent, the bowels regular, and the urinary system normal. There is no incoördination nor any subjective sense of vertigo. He stands easily with eyes closed; when in this position the upper lids are tremulous. The deep reflexes are slightly exaggerated. The pupillary reactions, fundus oculi, and fields of vision are normal. Hearing is equally good upon both sides. There is no pain in the head, and sleep has been good throughout the whole course of the disease. At no time has there been elevation of temperature. The tactile, common, and thermic senses are normal over the entire surface of the body. A careful comparison of the forearms in this respect does not show the slightest difference. The contractions are confined to the left forearm, and while there is marked loss of strength, there is still some movement in the affected fingers. It seems as though the little and ring fingers were capable of more extended movement than the others. The skin of the fingers has a decidedly shiny appearance due to trophic changes. There is no apparent diminution in the size of the muscles, though there is a loss of strength on voluntary movement. Owing to the constant agitation the electric reactions of the forearm cannot be obtained.

It is apparent that we have an irritative lesion in this case, but its exact location is a matter of some question. A cortical lesion is suggested by the limited extent of the lesion, but against this view are the trophic disturbances and the absence of all symptoms of meningeal irritation. The limited extent of the lesion militates against the view that it is located at the base, along the great conducting paths in the peduncles, pons, and medulla. On the other hand, the trophic changes are suggestive of spinal or peripheral nerve-disturbance. In view of the singular grouping of symptoms, we feel that it would be hazardous to venture a local diagnosis at this time. The most that we can say is, that there is an irritative lesion somewhere along the motor tract to the left forearm, and that it is probably of specific origin. We shall recommend that he be put on very large doses of potassium iodid, from 100 to 200 grains daily, and that he report at the end of a week.

CLINICAL MEMORANDA.

TETANUS COMPLICATING VACCINIA.

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OF BELLPORT, L. I.;
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ON November 6, 1893, I was requested to vaccinate M. D. W., a female white child, five years and five months of age, of American birth and parentage, and apparently healthy. The father is living, and healthy. The mother has two children, and has had one five months' miscarriage. She is of a strumous diathesis, and has had suppurative cervical adenitis. A second sister, aged about sixteen years, is living and in good health. The mother had scarcely made a tedious recovery from a five months' spontaneous abortion, when she again became pregnant. She was in a poor state of health throughout the entire period of gestation, having been subject to some severe trials and afflictions and emotional shocks. The child consequently started life handicapped, developed a neurotic temperament, and was the subject of a strumous diathesis, weak vitality, and poor nutritive functions, slight ailments always profoundly affecting her. Two years ago she had measles, followed by mumps, and although both attacks were light she had a strumous keratitis developed upon a preëxisting conjunctivitis. She suffered from exacerbations of chronic nasal catarrh and dyspeptic attacks. She was much pampered by her parents, who over-dressed her and indulged her in every whim. When in good health she was bright and vivacious, although a delicate child. On November 6, 1893, I vaccinated the child with a fresh ivory-point of bovine virus, using alcohol and a clean towel in preparation of the field of inoculation. The tenotome, with which I scarified the skin of the left arm at the insertion of the deltoid muscle, fifty millimeters square, was sterilized. The slightest scarification possible were made, and the point, moistened with water, from a driven well, was gently rubbed in, covered by a small piece of Lister's green protective and bandaged. This very slight operation produced great pallor, and the child almost fainted. I mention these minute details for reasons obvious that will appear.

I directed the mother not to disturb the bandage for several days; to use a simple dressing of vaselin, and to keep the ulcer free from accumulating pus by weak carbolized washings; and should there be any severe cellulitis, to bathe the inflamed area with aqua hamamelis. I cautioned against allowing the vaselin used to be employed for any other domestic purpose, and to use nothing but *clean* linen or muslin rags; and should anything require my professional attention to advise me accordingly.

I was informed on my second visit, November 24th, just eighteen days from the date of vaccination (when I was requested to call because the sore was not doing well), that my directions had been carried out. The vaselin had been taken from a partly used bottle into which those who had made use of it dipped their fingers. A quantity for this special purpose had been set aside on an individual butter-dish, uncovered, on a shelf in a cupboard. I found the child slightly indisposed, with a temperature of about 100.5°, with the tongue slightly coated; she was not inclined to eat, and had sluggish bowels. The arm was not swollen or discolored to any extent. The ulcer was about the size of a silver fifty-cent piece, deep, and containing a quantity of sanious pus of a very fetid odor. I examined the axilla, but no nodes were perceptible, nor did the child complain of tenderness at this point or around the sore. I inquired into the history since vaccination, and was informed that four days after I inoculated the arm it was inspected. Slight redness existed at the site of scarification, and there was a vesicle in process of formation. The surrounding parts were bathed and rubbed with witch-hazel water, and the protective and bandage were reapplied.

During the latter part of the second week the slough was complete. At no time had there been much disturbance; the cellulitis was insignificant, and the child was out playing every day. For a few days previous to my second visit there appeared an offensive odor, and

the pus was more abundant, although the child did not give evidence of any aggravation of the local trouble. The ulcer was full of pus; it had not been dressed since the evening before, awaiting my visit. There was nothing in its appearance to arouse suspicion. The ulcer was deep and the granulations were unhealthy, because of the indolent character they presented, and induration existed around the edges for a distance of about 1 cm. It had been cleansed by using a sponge and 4 c.c. of carbolic acid to 500 c.c. of warm water. The vaselin was said to have irritated the part where it had been applied to the edges to prevent the dressings adhering, and had been discontinued for a week or more. The witch-hazel water was used for bathing the parts, and the wound was dressed twice daily. I prescribed calomel in 0.015 doses every hour, until a stool should take place, to be followed by oleum ricini or Rochelle salts; to employ 4 c.c. of carbolic acid to 250 c.c. of boiled water instead of 500 c.c., as had been used; to discard the use of the sponge and employ a syringe or irrigator, and to moisten the dressings in the same solution, and to use balsam of Peru after the ulcer had been thoroughly cleansed. The vaselin was not used further.

I was informed that under this treatment immediate improvement was perceptible. The odor and the pus did not reappear. The dressing only required changing once daily. The bowels responded, appetite returned, and the child felt reasonably well. The size of the ulcer diminished, and what little induration existed around the margin disappeared entirely, and the granulations immediately assumed a healthy character.

On November 30th, the father took the child out for a walk, and when near the bay, a stiff breeze blowing at the time, she complained of a sharp pain in her throat on the right side, just posterior to the angle of the jaw. When she returned home the mouth was examined, and a number of small aphthous ulcerations on the margins of the tongue and lips were noticed. I was requested to call and see her. I found the child with a slight stomatitis and the aphthous patches mentioned. The tongue had a dark-gray coating. The pulse was 96, and the temperature 100.5°. The bowels were constipated, and the appetite fair up to that day. I wished to examine the throat, and on depressing the base of the tongue with the handle of a spoon (the child could not separate the jaws more than 75 mm.), she would close her mouth and bite on the handle, holding it for a few seconds quite firmly. I made three attempts with a like result, and abandoned further efforts, as the child was peevish. This trismus was characteristic; but as it often happens in such examinations with children, I attached no importance to the occurrence.

I prescribed a simple antiseptic astringent mouth-wash, also advising the extraction of a number of ragged decayed teeth, as there was occasionally some pain in the throat radiating from the angles of the jaws, and the left cheek and upper lip were slightly swollen. Providing she had fever, she was to be sponged with tepid water and alcohol until remission occurred. This was done once or twice, free diaphoresis following. On my visit next morning I found the patient about the same, with possibly more trouble in the throat, of which complaint was made on swallowing. The girl had not been taken to a dentist. There had been periods of depression and restlessness, and the child had taken only liquid nourishment and wished to drink frequently, which was allowed as much to cleanse the mouth as on general principles, as it was almost impossible for the parents to get her to use the mouth-wash to any effect. She talked freely, and most of the time seemed bright, but was apprehensive and wanted to be held in the lap. Occasionally, after sleeping, she would have slight strangling attacks from the accumulated mucus in the throat, which seemed to excite trismus, for she had difficulty in expelling it. Biniodid of mercury, 0.00065, was given every hour for "sore-throat"; also a mixture containing sodii bromidum and chloral, 0.24 of each to a dose.

I saw her again early on December 2d, still finding the symptoms about as before, together with some rigidity in the muscles of neck, and pains complained of in the back. The latter I attributed to her position, as she was almost constantly held in the lap. Although the child's general condition did not improve, she was less restless. The bowels were constipated, and calomel in 0.015 doses hourly was ordered until a stool was induced. She also had retention or suppression of urine, only urinating twice in twenty-four hours and indiminished quantity. The arm was examined each day and appeared healthy, not sore or inflamed; the temperature and pulse were normal. In the evening I was hurriedly summoned, as the child "had spit some blood" in one of her strangling or coughing attempts to expel the accumulated mucus from the throat. This was no doubt due to an injury to the tongue from trismus. The aphthæ seemed to be getting worse, and all attempts at using the mouth-wash with a swab excited trismus. In fact, the muscles of the jaws seemed to be in slight tonic spasm, as the girl was unable to separate her jaws more than from 60 mm. to 70 mm.; yet she conversed freely and drank her broth and milk up to this time quite readily. At midnight I was again called and informed that she had had a convulsion—"became stiff, did not breathe, and bent backward." This lasted "about a half-minute." When I arrived at the house she was resting quietly. She had not had any of the antispasmodic mixture since the previous afternoon. Although she sat up in bed, drank some broth and talked, and afterward relapsed into a quiet sleep, she could not be induced to take the medicine or use the mouth-wash. I remained until 2.30 A.M., leaving a bottle of chloroform to be used in case of further convulsions. What I had been apprehending for thirty-six hours I now became convinced was true, and I determined in the morning to suggest counsel, which I did; when I was called at 8.30 A.M., with the intelligence that she had had three more convulsions, but of slighter character—the anesthetic being promptly brought into use.

At noon of December 4th I met in consultation Dr. A. H. Terry, of Patchogue. During our examination the child had a typical paroxysm with opisthotonos, and deep anesthesia failed to separate her jaws. The grave prognosis I gave early in the day was confirmed by my confrère. The plan of treatment agreed upon was bromid and chloral per rectum, nutritive enemata, ice-bags to the spine, and chloroform when necessary to control the spasms. The paroxysms were clonic. The girl lapsed into coma from the time the anesthetic was administered; at the time of which she also received a

nutritive enema with the antispasmodic mixture, combined with tr. opii deod., gtt. x, and every three hours subsequently. While under the influence of these she was perfectly free from convulsions, even her jaw relaxing to its full extent, allowing the nurse to swab out the buccal cavity, which was not possible before.

In the morning I had detected cooing and mucous râles at the left base posteriorly. This unfavorable sign rapidly advanced and soon appeared as well in the right lung, and although she subsequently had only six more very slight convulsions she died from edema of the lungs on the next morning, December 5th, at 10.45. She had eleven distinct and characteristic convulsions, four of which were moderately severe, but lasting less than thirty seconds.

Although the course of the disease was short, its essential characteristics answered perfectly to the description given by Watson:

"During the fits of exacerbation the aspect of the sufferer is often frightful. The forehead is corrugated and the brow is knit, the orbicularis muscle of the eye rigid, the eyeball motionless and staring, the nostril spread, the corners of the mouth drawn back, the set teeth exposed, and all the features fixed in a ghastly grin—the true *risus sardonicus*. The tongue is apt to get between the teeth and be severely bitten. All the contractions are attended with intense pain."[1]

At the time of death the ulcer on the arm was not larger than a silver quarter of a dollar, was superficial, without tenderness or discoloration of the surrounding skin, or induration. Pus was slight, granulations were healthy; there was no cellulitis in the arm, nor were the axillary glands enlarged. Several hours before death the face became "bloated," the eyelids and lips much swollen, the jaw relaxing and the mouth open, while the purulent discharge drained along the dependent track of the buccal cavity and angle of the mouth quite profusely. The face soon after death rapidly assumed the natural features; the emphysema (?) entirely disappeared. Cutaneous discoloration from blood-stasis in the superficial circulation was marked in the dependent portions of the body, and rigor mortis was well advanced in less than one hour after death.

From the fact that this fatal case of tetanus has created a grave suspicion in the minds of a large number of people generally[2] and a deep prejudice in the locality against vaccination, I undertook to collect statistics from various sources. I wrote to the managers of the vaccine farm—one of the largest, most reputable, and scientifically conducted establishments in the world; and one in which thousands of the best physicians have unqualified confidence, besides being, perhaps, the largest producer of vaccine on the continent—and was informed that they had never had a case reported to them from the millions of points they had sold, nor had they heard of a case of tetanus from vaccination.

I also wrote to Dr. Cyrus Edson, Health Commissioner of the city of New York, and Surgeon-General George M. Sternberg, U. S. A. Replies from these gentlemen and from Dr. J. S. Billings, of the Army Medical Library, are reproduced. Besides these I have to state that I am greatly indebted to the courtesy of Dr. Judson C. Smith, of the Pathological Laboratory of the New York Post-Graduate Medical School and Hospital, who endeavored to make cultures from some of the pus and part of the tissue taken at time of death from the vaccination ulcer on the arm, *with negative results*. Efforts were made to obtain cultures from the point used for inoculation, and this also without success.[1]

[1] Prac. of Phys., Lect. xxxii.

[2] Several distorted articles appeared in the New York City papers, particularly in the New York *Sun* of December 9, 1893—only another evidence of the utter inability of the lay mind to correctly state facts or describe a scientific subject devoid of sensationalism. Also, an article appearing in the Suffolk Co. (N. Y.) *Argus* of January 6, 1894, emanating from a homeopathic physician of a neighboring town, stating that death was "lockjaw caused by vaccination," and denouncing in unmeasured terms vaccination and the statute that makes it compulsory.

[1] Dr. Cyrus Edson, of New York, wrote: "During my services in this department I have supervised the performance of over one million vaccinations; among all these cases not a single instance of tetanus has occurred. I believe that the disease is endemic in the eastern part of Long Island, and possibly as near us as Bellport. I should consider an abrasion of any kind in the locality I have named a dangerous thing. For this reason it is very unjust to blame vaccination for the circumstance."

Dr. George M. Sternberg, Surgeon-General, wrote as follows: "I do not know of any case of tetanus having occurred as a complication of vaccination, but I will refer to Dr. Billings, who has charge of the Army Medical Library, requesting him to have the literature of the subject looked up. As your case occurred four weeks after the vaccination, I agree with you in believing that it was a secondary infection, for which you were in no way responsible."

Dr. J. S. Billings, Surgeon U. S. A., wrote as follows: "I enclose herewith a memorandum of six cases of tetanus following vaccination, which are all I find recorded under that heading. You will see that they were all secondary infections:

"CASE I.—Dr. W. T. C. Bates, *Transactions of South Carolina Medical Association*, 1882, page 105. Mulatto boy, aged five years; vaccinated February 9, 1882, with humanized virus. Tetanic symptoms supervened March 8th. No other cause than vaccination found. Boy lived fifteen days.

"CASE II.—Dr. R. Carcia Rijo, *Cronica Medico-Quirurgica de la Habana*, 1886, vol. ii, page 388. White child, two years old; vaccinated in April, 1886; characteristic tetanus appeared in latter part of May. No lesion beyond vaccination found. Death followed on fourth day.

"CASE III.—Dr. George Ross, *The Southern Clinic*, 1878-79, vol. i, page 468. Boy, three and one-half years old; vaccinated, tetanus supervening three weeks afterward, with death on the third day. No other lesion beyond vaccination.

"CASE IV.—Dr. Theodore Dimon, *St. Louis Courier of Medicine*, 1882, vol. vii, page 310. Boy, nine years old, vaccinated January 6, 1882; bovine virus. Tetanus set in January 27th; no cause discovered except from vaccination, which was followed by an irregular-shaped ulcer Boy died on tenth day.

"CASE V.—Dr. Joseph B. Cottman, *New Orleans Medical and Surgical Journal*, 1854-55, vol. ii, page 783. Negress affected with tetanus following vaccination; period of time not stated. Recovery in two weeks by the use of large doses of opium.

"CASE VI.—Dr. H. J. Berkeley, *Maryland Medical Journal*, 1882, vol. ix, page 244. Healthy man, forty years old, vaccinated in middle of January, 1882. February 7th, tetanus set in; death followed February 13th. No lesion was discovered except at the point of vaccination; on the latter there was a deep ulcer, which had an inflamed and indurated border."

Dr. George M. Oxford, of Ridgewood, N. J., wrote me: "I have had under treatment, since November 29th, a case of idiopathic tetanus; it came on suddenly, without any vaccination or injury as far as can be learned. The symptoms were very severe

The fact that the child had an aphthous sore mouth, with a purulent discharge from the buccal cavity or throat, together with the open wound on the arm, leaves open a question of just how secondary infection may have occurred. True it is the sore mouth was coincident and coexistent with the first symptoms of the disease. Watson[1] cites cases of tetanus from salivation. Moreover, beside this case stand the hosts of so-called idiopathic cases. Although no attempt is made to believe this case might have been such in view of the presence of an open wound on the arm and eroded mucous membranes of the mouth and throat, yet the possibility of such being a coincidence might not be altogether disregarded.

From the period of time elapsing from the date of vaccination to the developing of the tetanus, it is certain that this does not correspond to the accepted view of the period of incubation.[2]

In conclusion, the possible source of infection of *the ulcer* might have been from (1) vaselin (which might have been infected from previous use); (2) sponge (which might have been dirty); (3) unsterilized dressings; also from the solution of continuity of the mucous membranes of the mouth and throat.

Against the theory that it was due to vaccination is

1. The existence of "sore mouth," which is possible as offering a nidus for infection.

2. The date of onset not corresponding to the generally accepted period of incubation; and absence of bacilli of tetanus in the pus and tissue from the wound.

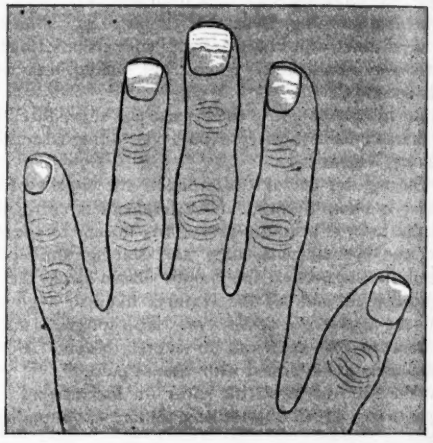
3. The fact that the disease manifested such a mild course, and that the fatal issue was depending upon an intercurrent complication. Had not this unfortunate circumstance occurred, and had the child possessed ordinary vitality, it is but reasonable to assume that she would have recovered.

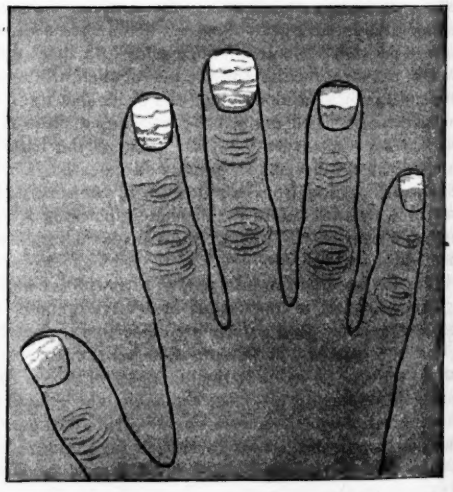
A point that is a matter of regret to the writer is that there was no attempt made to obtain cultures from the purulent discharge from the mouth.

LEUKOPATHIA UNGUIUM.

BY F. J. STOUT, M.D.,
OF PHILADELPHIA, PA.;
INSTRUCTOR IN DERMATOLOGY IN THE PHILADELPHIA POLYCLINIC.

THIS term (derived from λευκός, white, and πάθος, disease) has been given to that condition in which white spots appear upon the nails. A very striking example of this peculiarity was exhibited in the case of A. C., a mulatto, who presented himself in July, 1893, at Dr. Van Harlingen's clinic at the Philadelphia Polyclinic for treatment. The patient is a waiter by occupation, and twenty-one years of age; he has scrofulous glands on the left side of his neck, and is suffering with gastritis; his mother died of tuberculosis; his father is still living. He had always enjoyed good health until last April, when he had an attack of influenza. He is an individual of medium size, and fairly intelligent; at present he is some-





what nervous and weak. The nails of his fingers, and some of those of the toes, present quite a peculiar appearance, being marked with wavy white lines and white spots of a milky color. It will be necessary to describe the appearance of the nails on the individual fingers and toes separately, as they differ somewhat. The nails of the index, middle, and ring fingers of the right hand (see illustration) are marked with a wavy, transverse, white line or lines, more or less perfect, extending from one margin of the nail to the other; between the lines on the index and middle fingers there exist interspaces, which

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at first, with marked trismus. Now there is more remission and better sleep, but renewal of lighter attacks from reflex irritation, such as noises, etc. I write you this to show that other causes than vaccination may account for your case. My patient is twelve years old."

[Dr. Oxford evidently had seen one of the New York papers with the account of my case, and voluntarily wrote me the foregoing letter. I am not personally acquainted with him. The Doctor writes me under date of January 22, 1894, that his patient is still under treatment, and that his condition is almost unchanged]

[1] Watson's Prac. of Physic, Lect. xxxiii.

[2] "Within two weeks" (Osler, page 162). "Most frequently makes its appearance at end of first week" (Amer. Text-book of Surgery, page 67). Although Senn (Principles of Surgery, page 392) says: "The period of incubation appears to be extremely variable."

are normal in color and each about one-sixteenth of an inch in width; the nails of the thumb and little finger are marked each with three separate white spots. On the left hand a similar condition is also observed to exist; each of the nails of the middle and ring finger of this hand exhibits a transverse white band, more or less irregular in contour, extending from one margin of the nail to the other; the narrow strip of intervening normal color between the bands, referred to as existing on the index and middle fingers of the right hand, is, however, lacking on these finger-nails. The band on the middle finger occupies about one-half of the length of the nail; the nail of the thumb is marked with a distinct large white spot on its margin; the nail of the little finger presents a white spot on its surface near the center, and is white along its margin. The nail on the index finger has three transverse bands, which do not extend entirely across the nail-surface, and between these there exists an interspace of about one-eighth inch, which is normal in color. The rest of the nail-substance of all of the fingers appears normal in every respect, and presents a healthy and glossy appearance.

Some of the nails on the toes are similarly marked. On the nails of the right foot white bands are visible, which extend partially across the nail-surface, and also exist at the margin of the nails of the great toe, the second, third, fourth, and fifth toes. On the left foot the margins of the nail of the great and second toes are marked respectively with a similar white line. With this exception, the nails of the toes of both feet do not show any abnormality whatever, and are perfectly healthy in other respects. The hair of the individual does not show any discoloration, but is quite black in color.

According to the patient's statement, these lines and white spots have been present ever since he can remember, and have never disappeared at any time, and no other member of his family on either side has been similarly affected; it would appear from the history of the case that the condition is probably congenital.

The appearances presented by the finger-nails in this man are similar to those existing in a case described by Morison, of Baltimore,[1] occurring in a young lady, twenty years of age, which made their appearance without ascertainable cause, and disappeared after a few months; the nails of the toes, however, were not affected, differing, therefore, in these respects from the case under consideration. Dr. Morris Longstreth, of Philadelphia, in a paper entitled "On Changes in the Nails in Fever, and Especially in Relapsing Fever," describes the appearance of white bands on his own finger-nails after an attack of relapsing fever, which occurred at the time of each relapse of the fever. Crocker (*Diseases of the Skin*) quotes a case recorded by Bielschowsky[2] of a man with peripheral neuritis, in which white spots appeared at the lower part of the finger-nails, rapidly grew, and in three weeks coalesced into a band extending across each nail, a millimeter wide. The toes were not affected. Cases are also on record by Giovannini and Unna[3] (quoted by Crocker) in which the nails on the hands of male individuals were completely white. In Giovannini's case the affection followed an attack of typhoid fever in an individual twelve years old; the hair retained its original color. In Unna's case the condition was probably congenital, and the hair presented a partial appearance of the condition known as ringed hair. Dr. Langdon Down[1] records the presence on the fingers and toes of a gentleman, of two distinct sets of white lines extending transversely over the nails, which made their appearance after he had experienced two attacks of poor health from severe overwork; in this case marked prostration, intermittent action of the heart, and ulceration of one cornea existed; the lines on the nails corresponded with the time of the occurrence of the two attacks. Dr. Herman Lawrence describes[2] a case of leukopathia unguium, characterized by the presence of white bands, in an apparently healthy middle-aged man, which he regards as congenital. The nails on the fingers of this patient's child, a boy five years old, presented a similar appearance, though not so distinctly marked. Dr. Lawrence expressed the opinion that the nails of the child would, in the course of time, show the identical banded condition existing in the father's case.

Careful microscopic examination of nail-substance marked as in the case here described, shows the white bands to consist of air-spaces in the nail-substance, similar to those found in gray hairs; we are, however, unacquainted with their mode of origin. White spots, which occur occasionally on entirely healthy nails, point to passing changes in the site of formation of the nails (Hyrtl). Among convalescents from malignant fevers the nails have been noticed to become white. Whiteness of the nails of a chalky hue has been observed in paralytic patients. Sometimes the appearance is evidently partially dependent on trophic changes, as in the cases of Longstreth and Down. According to Hutchinson, white spots may be due to picking back of the nail-fold, and frequently coëxist with similar white spots on the teeth. Geber is of the opinion that they are produced by mechanical means that interfere with the complete cornification of the nail-cells. To these white spots on the nails the ancients gave the name of flores unguium, and in Fallopius' time they were called mendacia ("lies"), and are still vulgarly known as "flowers," or "lies," and as "gift-spots." I am indebted to Dr. E. L. Billstein for the accompanying illustration.

2422 N. BROAD STREET.

[1] "Leucopathia Unguium," THE MEDICAL NEWS, 1887, vol. li, p. 430.

[2] British Medical Journal, Supplement, January 17, 1891.

[3] Giovannini, "Canities Unguium;" Unna, "Leuconychia and Leucotrichia," Internat. Atlas, plate xix.

A Royal Physician.—A number of months ago we took occasion to call attention to the noble work of Duke Karl Theodor of Bavaria. It transpires that another member of the same house, Prince Louis Ferdinand, has likewise engaged in the practice of medicine. The Prince is the cousin of Duke Karl Theodor, nephew of the Prince Regent of Bavaria, husband of the Infanta Maria de la Paz of Spain, and is twenty-three years old. He has recently published a monograph detailing the results of a study of the etiology and pathology of pleurisy, based upon clinical, bacteriologic, and therapeutic observations in twenty-three cases.

[1] Transactions of the Pathological Society, 1870, vol. xxi, p. 409.

[2] The Australian Medical Journal, October 15, 1893.

HOSPITAL NOTE.

A CASE OF RUPTURE OF THE LUNG, UNASSOCIATED WITH FRACTURE OF THE RIBS, WITH EARLY SUBSEQUENT RECOVERY.

Emergency Hospital, Washington, D. C.

SERVICE OF JAS. KERR, M.D., M.CH.,
ATTENDING SURGEON.

Reported by W. L. PYLE, A.M., M.D., Resident Physician.

THE mechanism of this rare and fatal form of injury has been very aptly described by M. Gosselin. It is due to a sudden pressure exerted on the thoracic wall at the moment of full inspiration, there being a spasm of the glottis or obstruction of the larynx; in consequence of which the lung bursts. An extravasation of air occurs, resulting in the development of emphysema, pneumothorax, etc. Subsequently pleurisy, pneumonia, or even pus in the pleural cavity often results. Hemoptysis is a possible, but not a marked symptom. The mechanism is identical with that of the bursting of an inflated paper bag when struck by the hand.

M. Gosselin reports two cases terminating in recovery. Dr. John Ashhurst, Jr., reports having seen three cases, all of which terminated fatally before the fifth day; he has collected the histories of thirty-nine cases, of which twelve recovered. Dr. Otis has collected reports of twenty-five cases of this form of injury from military practice exclusively. These were generally caused by a blow on the chest, by a piece of shell, or other like missile. Among the twenty-five cases there were eleven recoveries. As Dr. Ashhurst very justly remarks, this injury appears more fatal in civil than in military life.

That so severe a form of injury should show such a rapid and continuous recovery as in the case here cited is without a doubt extraordinary, and would seem to make it worthy of report.

Lewis W., ten years old, white, born in Maryland, and living now in the District of Columbia; was brought in by the Emergency Hospital ambulance on the afternoon of November the 10th, with a history of having been run over by a hose-cart of the District Fire Department. The boy was in a state of extreme shock, having a weak, almost imperceptible pulse; his respirations were shallow and rapid, and his temperature subnormal. There were no signs of external injury about his thoracic cavity, and no fracture of the ribs could be detected, although carefully searched for; there was marked emphysema; the neck and side of the face were enormously swollen with the extravasated air; the tissues of the left arm were greatly infiltrated with air, which enabled us to elicit the familiar crepitus of such infiltration when an attempt at the determination of the radial pulse was made. Consciousness was never lost. There were several injuries to the face and scalp; and there was hemorrhage from the nose and mouth, which was attributed to the fact that the patient had fallen on his face, striking both nose and lip. This was confirmed subsequently by the absence of any evidences of hemoptysis during the whole period of convalescence. The saliva was not even blood-streaked; therefore it can be said with verity that there was no hemoptysis.

The first indication in this, and in all similar chest-injuries, is to limit the amount of thoracic expansion. To effect this, the chest was securely strapped with overlapping bands of adhesive plaster, extending nearly around its whole circumference, and a muslin binder was applied. Hypodermatic injections of strychnin and whiskey were resorted to, and hot-water bottles applied, the patient being wrapped in blankets. It was soon found that the respirations were easier, and the pain less marked when the patient was propped up in bed by several pillows, than in the dorsal position. To further control respiration, morphin sulfate in doses of one-sixteenth grain was given at sufficient intervals to keep the rate below 20.

Shortly after admission the patient reacted to the stimulating treatment, his pulse became stronger, and all evidences of threatened collapse disappeared. He rested well the first night and complained of no pain, then or subsequently. The improvement was continuous. The temperature remained normal until the evening of the fifth day, when it rose to 102.2°, and again on the evening of the sixth to 102.3°. This rise was apparently without significance, as the patient at no time seemed disturbed by it. On the eighth day the temperature again reached the norm and has since remained there.

The advisability of thoracic puncture and superficial scarification of the infiltrated tissue to relieve the emphysema was considered; but realizing that such emphysema was not in itself dangerous and that the patient's condition constantly improved under treatment, these procedures were not employed. The wisdom of this decision was demonstrated by the continued absorption of the air and diminution of the emphysema until the ninth day, when it was entirely absent from the tissues. A slight pneumothorax, however, remained. On the ninth day the chest was again carefully examined for evidences of a fracture, but the result of this second examination was again negative; leaving no doubt but that the case was one of rupture without fracture. There developed a slight, dry cough on the fifth day, which, however, soon subsided without any further treatment. The diet was exclusively of milk for a week, when light diet was substituted. The bowels were kept open daily by salines and enemata.

The boy is apparently well now, suffers no inconvenience, and has left the hospital, safe from danger and apparently free from any pulmonary embarrassment. He uses well-developed diaphragmatic breathing which is fully sufficient.

MEDICAL PROGRESS.

A New Method of Examining the Kidney, especially for Stone —At a recent meeting of the Philadelphia County Medical Society, DR. CHARLES P. NOBLE reported the case of a woman, thirty-seven years old, in which the kidney, its pelvis, and perhaps an inch of the ureter, were examined through an exploratory incision in the loin. During a period of six years there had been three attacks of hematuria, accompanied with "renal colic," good-sized stones being passed on two occasions, and the last coming from the left kidney. There had been, besides, milder attacks of paroxysmal pain referred to the right inguinal region, the pain being perhaps most acute just above the greater trochanter of the right femur.

These attacks had become of daily occurrence, and

were brought on when the woman was on her feet. She was usually, though not always, comfortable when in bed, but the pains came on shortly after attempts at walking. The sexual organs were normal, with the exception of a trifling tear in the perineum. The urine was examined many times, and had a very uniform composition. Its specific gravity varied between 1013 and 1020, and the reaction was acid; it contained pus, vesical and ureteral epithelium, but none from the pelvis of the kidney. The urine from each kidney was examined separately, being obtained by means of the ureteral catheter, and was found much the same, the pathologic elements being somewhat more numerous on the right side. The urine from the left kidney always flowed through the ureteral catheter freely and regularly; that from the right kidney did not. Upon two occasions the ureteral catheter remained in position upon the right side upward of twenty minutes, and not more than one or two drops of urine flowed out. Upon another occasion, after waiting thirty minutes with the same result, suddenly 120 minims poured out.

The conclusion was reached that there was a stone in the pelvis of the right kidney. Several attempts were made to pass a ureteral sound along the ureter toward the kidney, but it was not possible to make the sound reach above the brim of the pelvis. It was therefore proposed that an incision be made in the loin for the purpose of examining the kidney and the upper portion of the ureter from above.

Accordingly the usual incision in the loin was made down to and through the peri-renal fat, exposing the lower end of the kidney. With the index finger the kidney was then separated from its connective-tissue attachments and gradually drawn down into and out through the wound, so that it was entirely outside. It was now a very simple matter to explore the kidney by thumb-and-finger pressure, and to make certain that it was in a normal condition. It was equally easy to examine the pelvis of the kidney and to determine that this contained no stone. Perhaps one inch of the ureter also was within reach.

As nothing abnormal could be felt, the kidney was replaced within the abdomen and the incision was sutured in the usual way—buried silkworm-gut sutures being placed in the muscular layer, and superficial silkworm-gut sutures in the skin. No unfavorable reaction followed this operation, and so far as the operation itself was concerned the patient made an uninterrupted recovery. Unfortunately the operation produced no effect whatever on the symptoms.

The opinion is expressed that it should be a simple and safe matter in the hands of a skilful surgeon, who has had some experience in kidney-work, to remove through an incision in the loin all non-suppurating kidneys having approximately the normal size, for the purpose of a careful examination. The procedure is certainly not one of much gravity, and when done under the conditions laid down should have no mortality. Tentatively the adoption of this method of exploring the kidney is recommended whenever the symptoms point to the presence of stone in the kidney or its pelvis, and when these symptoms are of sufficient gravity to invalid the patient.

Upon theoretic grounds this procedure would not be applicable in cases of abscess of the kidney. Under these conditions the kidney would supposedly be fixed and not easily separated from its connective-tissue bed. Moreover, it would be enlarged, and in addition to this there would be the risk of rupturing the pus-sac, perhaps into the peritoneal cavity.

Akromegaly.—At a recent meeting of the Manchester Medical Society, DRESCHFELD (*British Medical Journal*, No. 1716, p. 1107) presented a man, thirty years old, who five years before began to display symptoms of akromegaly. The bones of the face and skull were enlarged, especially the lower jaw; the hands and feet showed the characteristic thickening and enlargement, and the bones of the forearm and the clavicles likewise to some extent. There was atrophy of both optic discs, with complete blindness of one eye and diminished vision of the other, without hemianopsia. The thyroid gland could not be felt, but on either side was a well-defined swelling, dipping down into the thorax, and being apparently connected with a mass there which gave rise to dulness on percussion over the upper portion of the sternum. The voice was hoarse and the epiglottis was thickened, but there was no paralysis of the vocal bands. The subjective symptoms consisted of occasional pains in the head. There was also marked sexual weakness. The patient came under observation on account of the excessive dyspnea, which soon yielded to arsenic, with distinct diminution in the size of the tumor-masses in the neck, so that the man was able to resume his avocation. In a discussion of the pathology it was pointed out that neither the persistence of the thymus nor the enlargement of the pituitary body, which must be considered only as one of the symptoms of the disease, can be looked upon as the cause of the disease, which appears to be rather neurotrophic in nature.

Membranous Enteritis in a Young Child.—THOMSON (*Archives of Pediatrics*, vol. xii, No. 1, p. 36) has reported the case of a child, two years and four months old, that came under observation on account of being out of sorts and passing pieces of membrane in the stools. The child was pale, but otherwise appeared to be perfectly healthy. Some three months later a second attack of similar character occurred. Both were attended with restlessness at night, crying out, grinding of the teeth, and throwing off of the bedclothes. There was a good deal of tenesmus. The administration of laxatives was followed by the appearance of blood in the stools. The membrane presented the characters of that met in croup. Some of the thicker pieces were distinctly composed of two layers. At times the membrane was passed as an entire tube enclosing the formed feces. Under the microscope it presented a glassy-looking matrix, in which were imbedded at pretty regular intervals numerous epithelial cells in process of fatty degeneration, besides colorless blood-corpuscles and innumerable microörganisms of various forms and sizes. On chemic analysis the membrane was found to be composed mainly of fibrin. In both attacks a mixture containing nux vomica, sodium bicarbonate, and rhubarb was given, and also a few doses of gray powder and rhubarb. This treatment seemed to exert a favorable influence, being followed in a few days by diminu-

tion in the thickness and amount of the membrane, and by a distinct improvement in all of the symptoms.

Intermittent Hydronephrosis Cured by Simple Puncture.—At a recent meeting of the Paris Société de Chirurgie, HUE (*Revue de Chirurgie*, 1893, No. 12, p. 1051) reported a case in which a large tumor had been present in the left hypochondrium for several years, but disappearing from time to time, either spontaneously or as a result of gentle pressure, its subsidence being attended with an urgent desire to urinate, followed by the evacuation of a large quantity of urine. For some time, however, the tumor had become permanent. A diagnosis of intermittent hydronephrosis was made, and transperitoneal puncture brought away clear fluid containing a good deal of urea. The tumor disappeared after this slight operation. It did not reappear, and the patient thereafter remained in perfect health. The opinion was expressed that the puncture relieved a cicatricial band consecutive to tabes mesenterica in infancy and compressing the corresponding ureter.

Sudden Blindness in the Course of Diabetes in Young Persons.—At a recent meeting of the Berlin Society for Internal Medicine, LITTEN (*Deutsche medicinische Wochenschrift*, 1893, No. 47, p. 1225) reported the cases of two children suffering from diabetes, in which blindness appeared suddenly. The one case was in a girl, seventeen years old, in whom vision had been impaired, and blindness developed in the course of a few hours. Upon inspection the crystalline lens of one eye was found to be quite opaque, and light-perception was lost in this eye. The lens of the other eye presented considerable striation, and vision was cloudy and obscure. The cataractous lens was successfully extracted, with subsequent improvement in vision. The second case also occurred in a girl, seventeen years old, who suddenly became blind in both eyes, with loss of light-perception In this case operation was not acquiesced in.

THERAPEUTIC NOTES.

The Pharmacologic Action of Amylene Hydrate.—As the outcome of a physiologic study, HARNACK and MEYER (*Zeitschrift für klinische Medicin*, Band xxiv, Hefte 3, 4, p. 374) arrive at the conclusion that amylene hydrate, like alcohol, paralyzes successively all parts of the central nervous system, after preceding stimulation of individual parts. In herbivora quiet sleep is produced; in dogs and cats the symptoms of excitation and of profound intoxication in general predominate. In small, warm-blooded animals moderate doses are followed by a decline of 4° or 5° C. of temperature, larger doses by a decline of from 10° to 12° C. Even in dogs a decline of 6° may take place. The most pronounced reduction follows the use of a combination of amylene hydrate and certain tetanizing poisons—*e. g.*, santonin. The profound reduction of temperature increases the danger of death, which, on the other hand, is diminished by artificial heat. Respiration is at first increased in frequency and depth, but subsequently becomes progressively weaker to the point of paralysis of the respiratory center. In man the pulse-curve may present certain typical changes (diminution in the systolic elevation and disappearance of the dicrotism) after a dose of a dram. The blood-pressure sinks in warm-blooded animals slowly and progressively until death ensues. Amylene hydrate exerts a peculiar action upon striated muscular fiber; the energy of the frog's heart is for a time enormously increased; there then occurs a sudden fall, followed by irregularity and finally paralysis of the cardiac muscular fiber. The energy of the frog's muscle is at first notably increased, but subsequently there occurs paralysis. Amylene hydrate possesses the power of lessening and retarding the tetanizing action of certain poisons—*e. g.*, santonin, picrotoxin, strychnin. It would be worth while to study clinically the antithermic action of a combination of amylene hydrate and santonin. The results would appear to be promising, as amylene hydrate, when introduced into the stomach, diminishes the elimination of urea, lessening the metabolism of nitrogenous bodies in the organism. The subcutaneous injection of amylene hydrate is objectionable, being followed by increased elimination of urea, probably as a result of the energetic local action of the drug, which leads to abscess-formation and necrosis.

The External Application of Guaiacol to Reduce Febrile Temperature.—As the result of observations in twenty cases of various febrile conditions, including pulmonary tuberculosis, croupous pneumonia, typhoid fever, acute rheumatism, and puerperal infection, STOLZENBERG (*Berliner klinische Wochenschrift*, 1894, No. 5, p. 109) arrives at the conclusion that guaiacol, applied to the skin, acts promptly and energetically in reducing temperature. The initial dose for adults should not exceed 30 minims. If this is well borne and a satisfactory reduction of temperature is not brought about, the dose may be cautiously increased, although it will rarely be necessary to exceed a dose of a dram. Moderate doses (not exceeding a dram) exert no unfavorable influence upon heart, kidneys, or other important organs. Larger doses may, in debilitated persons, give rise to manifestations of collapse. The decline in temperature is usually attended with free perspiration, which, together with the chill that occurs when the temperature subsequently rises, exerts so depressing an effect if frequently repeated as to preclude the recommendation of guaiacol for protracted use in the reduction of temperature. It was not observed that any influence was exerted upon the general course of the disease in which the agent was employed.

For Acute Coryza.—

℞.—Acidi carbolici } . . āā ʒijss.
Liq. ammoniæ fort. }
Alcoholis . . . . . ʒv.
Aquæ destil. . . . . ad ʒj.—M.

S.—Several drops to be placed upon a sponge or bibulous paper and inhaled frequently.

HAYEM, *Med. Press and Circular*, No. 2856.

For Influenza.—

℞.—Succi digitalis . . . . . ɱx.
Tinct. aconiti (B. P.) . . . . ɱijss.
Liq. ammoniæ citratis . . . . ʒijss.
Aquæ . . . . . ad ʒss.—M.

S.—Repeat every hour for four hours, then every two, three, or four hours.

BURTON, *Med. Press and Circular*, No. 2856.

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THE BACTERIOLOGIC EXAMINATION OF DRINKING-WATER.

WHEN KOCH discovered his method of isolating germs by plate-cultures it was believed that the vexed question of deciding whether or not a certain water could be used by man without harm had been settled. Bacteriologists in all parts of the civilized world arranged their gelatin-tubes, cold chambers, and plates, and the good work began. The typhoid-bacillus should no longer hide itself in our daily drink. The chemist, with his estimations of free and albuminoid ammonia, chlorids, nitrates, nitrites, etc., had been unable to capture this great enemy of man, but the bacteriologist promised that he would succeed. What could be more easy? By means of the plate-cultures, each germ in the water could be isolated and grown in pure culture. After the latter had been obtained, the typhoid-germ, it was supposed, wears a uniform so distinct and characteristic that it can be recognized at sight. But it was soon found that the wily bacillus does not display any characteristic marks, if he has any. The bacteriologist was forced to admit that the task which he had undertaken was not so easy. Even the cholera-germ sometimes appears without his crook, and the typhoid germ forms a plainly visible mould on potatoes. Moreover, ordinary harmless saprophytic germs may have a properly fashioned curve and may form an invisible growth on potatoes. Having ascertained these facts, the bacteriologist changed his tactics. He no longer tried to isolate the specific microbe. He would decide as to the purity of a drinking-water by the number of germs present. But again there was trouble. One man thought that the limit for a safe drinking-water should be fifty germs per cubic centimeter, while another placed the limit at ten times this number. A learned professor at Jena closes a treatise of nearly three hundred pages on the bacteriologic examination of drinking-water with the following conclusions:

"The use of water which contains a specific pathogenic germ should be absolutely forbidden."

Then he goes on to say:

"The detection of specific pathogenic germs in water is surrounded by so many difficulties that its accomplishment is not likely to occur in the future."

With this statement he gives up the search for specific germs and takes up the number per cubic centimeter. Having decided that the proper solution of the question lies in counting the number of germs, he capitalizes the following:

"A large number of germs in the water of a well whose surroundings are questionable and of whose proper construction we are not certain suggests the possibility of infection. On the other hand, however, when the surroundings are favorable, when the well is properly constructed and covered, one may use the water notwithstanding the presence of a large number of germs."

If one of the most eminent authorities comes to the conclusions mentioned, it can hardly be a matter of surprise that some should regard the method ordinarily practised in the bacteriological examination of drinking-water as not altogether satisfactory.

In THE MEDICAL NEWS for June 14, 1890, p. 641, and in the *American Journal of the Medical Sciences* for August, 1892, p. 167, DR. VICTOR C. VAUGHN details the method used in the Hygienic Laboratory of Michigan University. This method consists briefly of the following steps:

First. The water is collected in sterilized bottles.

Second. Beef-tea tubes are inoculated with water, from one drop to one cubic centimeter being added to each tube.

Third. The inoculated tubes are kept at 38° C. for twenty-four hours.

Fourth. Many germs found in drinking-water will not grow at so high a temperature. Waters containing only such germs are pronounced safe. Certainly it must be admitted that a germ which will not grow at the temperature of the human body cannot possibly induce disease.

Fifth. Of the germs which do grow at 38° or higher, some are toxicogenic to animals, while others are not. Whether the germs in a given sample are toxicogenic or not is determined by injecting the prepared cultures subcutaneously or intra-abdominally in rats, guinea-pigs, rabbits, or mice.

Sixth. Waters containing only the non-toxicogenic germs growing at 38° or higher are reported as safe.

Seventh. Waters containing toxicogenic germs are condemned. In testing the virulence, a germ is not pronounced toxicogenic unless it be found growing and multiplying in the animal inoculated with it.

This method has been employed in the Hygienic Laboratory of the University of Michigan since October, 1888.

Recently BLACHSTEIN, working in the Pasteur Institute under the direction of METSCHNIKOFF (*Annales de l'Institut Pasteur*, No. 10, October, 1893) reports a method which may be condensed as follows:

First. Beef-tea is inoculated with the water.

Second. These tubes are allowed to stand for some days at ordinary temperature.

Third. From ½ to 1 c.c. of these mixed cultures is injected subcutaneously or intra-abdominally into guinea-pigs or rabbits.

Fourth. If the animal is killed by this injection the water is condemned.

BLACHSTEIN concludes his paper with the following paragraph:

"While I do not wish to draw any definite conclusions, I must emphasize the general fact that in all my researches waters which are suitable from the hygienic standpoint produce mixed cultures, when prepared as indicated, which are wholly inoffensive to animals."

It will be seen that there is nothing new in this method of BLACHSTEIN. It is crude compared with the Michigan method. There is no separation of those germs growing below 38° from those growing at this temperature or higher. While the former certainly cannot affect man, their cultures may contain chemic poisons which may kill the animals. There is no attempt in the method of BLACHSTEIN to ascertain whether or not any of the germs live after their introduction into the animal. This method is published as a discovery and is recommended as the best means of determining the purity of drinking-water, while, as we have stated, the other method, which contains whatever of good there is in BLACHSTEIN'S and excludes much that is doubtful, has been in use for more than five years.

KOCH, in his recent contribution upon the diagnosis of cholera (*Zeitschrift für Hygiene*, B. xiv), also adopts the inoculation-method in determining whether or not the cholera-bacillus is present in a given sample of water. He states that spirilla resembling cholera-germs may be found in many waters, and he recommends only two tests in deciding whether or not a given sample of water contains this bacillus: first, the indol-reaction, and second, the effect upon animals. We certainly do not see how much reliance can be placed upon the indol-test, because, as is well known, many germs, including some spirals, produce cultures which respond promptly to the indol test. This is true of the vibrio of METSCHNIKOFF, the FINKLER-PRIOR spirillum, DENEKE'S vibrio, and a comma-bacillus recently obtained from water by BONHOFF, likewise one by NEISSER There are also present normally in the small intestines of man germs which produce indol. Every tyro in physiology knows that the production of indol through the activity of bacteria is constantly going on in the small intestines and is regarded as a part of intestinal digestion.

We have called attention to these methods of hygienic examination of water because the matter is one of great importance, and certainly it is time for us to dismiss the unscientific and useless procedure of determining the number of germs in a water without any reference to the kind of germs.

AN OPPORTUNITY FOR AMERICAN MEDICINE TO AID AMERICAN BIOLOGY.

EVERY physician who has the best interests of his profession at heart will admit that these interests will be advanced by bringing into medicine students of broad scientific education. The very commendable effort of some of our medical schools to advance medical education is a step in this direction.

Unquestionably, the students most desirable for medicine are those who have received a thorough training in the biologic sciences. Therefore, any-

thing which will increase the efficiency of biologic teaching must indirectly benefit medicine. But medicine, unfortunately, is still backward in extending to biology that fellowship so essential to successful results; and medicine does not offer the trained biologist a flattering prospect. It follows, then, that the biologist does not extend his energies into an unprofitable field, and, as a consequence, biology retains and medicine loses a valuable adherent. In fact, it too frequently happens that biology, instead of medicine, offers to the scientific physician an alluring field.

What may be done to invite into medicine this most desirable class of students? Elevate the entrance requirements and improve the course of study. Make provisions for well-trained and scientific physicians which will encourage them to remain in the profession, and to give to medicine the fruits of their labor.

Finally, coöperate directly with the biologists of America in any effort which will lead to a mutual advantage.

For several years a company of American biologists, under the direction of PROFESSOR C. O. WHITMAN, of the University of Chicago, have endeavored to put upon a sound working basis a coöperative marine biologic laboratory, at Wood's Holl, Massachusetts. From time to time PROFESSOR WHITMAN has set forth the aims of this institution, and has pleaded for the support and growth of the enterprise.[1] We earnestly recommend anyone who is interested in this subject to consult these articles for full details of the project.

Suffice it to here say that the Marine Biological Laboratory at Wood's Holl is a seaside research and instruction laboratory which is supported by the coöperation of certain American biologic schools and societies, and in which students are received for biologic instruction, and advanced workers are assisted in the prosecution of original researches. The pecuniary support of the Laboratory is entirely dependent upon private endowment; upon the subscriptions of interested institutions; and on the fees of the students; Government aid, for unfortunate political reasons, being neither proffered nor desired.

"The character and work of the Laboratory are shown by the following facts: The Laboratory is governed by a board of trustees on which the leading colleges and universities are represented. Its officers have been drawn from as many as *fifteen* of our higher educational institutions, and its membership has extended to *one hundred and thirty-one* colleges, universities, seminaries, academies, schools, and laboratories. During the last session forty-one investigators worked at the Laboratory, while the whole number, including students, was one hundred and eleven, representing seventy-two institutions and no less than seventeen States. Nearly *one hundred scientific papers and books* have resulted from work at the Laboratory, and have been published or are now in press."[1] Many of these papers are of profound interest to medicine.

Along with its other functions the Laboratory aims to become a center for research in *comparative physiology*, and, later, in *comparative pathology*. Assuredly, this means much for medicine.

As with every other altruistic enterprise in this egoistic age, the Laboratory is much hampered for funds wherewith to carry out its aspirations. It needs, moreover, the coöperation of more institutions—in this extensive coöperation everything is possible.

Is it not time for American Medicine to go on record as recognizing its sister science, American Biology, in support of this Laboratory of grand possibilities? Cannot every first-class medical college and medical society in this country afford to accept the invitation of PROFESSOR WHITMAN and his colleagues, and subscribe for a table at the Laboratory, or send some worthy student to profit by its advantages?

Let us at least make the acquaintance of a project which has every claim upon us.

[1] The Popular Science Monthly, February, 1893; The Atlantic Monthly, June, 1893; Biological Lectures, delivered at the Marine Biological Laboratory of Wood's Holl, 1890 and 1894, Ginn & Co.

EDITORIAL COMMENTS.

An International Sanitary Conference, for the consideration of the measures to be taken to regulate the pilgrim traffic in the Red Sea and Persian Gulf, with the view of preventing the importation of cholera to Mecca and its dissemination thence along the track of the returning Hajjis, which was originally to have been held in Paris on January 24th, was postponed to February 6th. It was expected that the Conference would occupy itself with tracking the cholera to its seats of origin—that is, Asia and India, dealing especially with the Meccan pilgrimage. There is reason to hope that the Sultan and the Shah of Persia will assist in arresting the development of cholera at its Asiatic ports of entry and posts of reinforcement.

[1] Extract from circular for "Local Committees."

As Mr. Ernest Hart has pointed out, Mecca is a main center from which European cholera spreads, and Hagar's well, where the Mussulman pilgrims wash and drink, is nothing better than sewer-water; in one day (June 26, 1893) there were 500 deaths at Mecca from drinking this water.

It seems agreed that the extinction of epidemic cholera in Europe may be secured without great difficulty. There are two ways of attaining this result: to insure everywhere perfectly pure drinking-water, and meantime put an end to the cause of insalubrity of the Meccan pilgrims. "Outside of this all measures are illusory; fumigations, railway and frontier quarantines, powderings and antiseptic fluids, are only vain ceremonies, simple sacrifices to popular ignorance, the idolatrous homage which dirt pays to cleanliness. The prime focus of cholera is India; its gates of invasion are the Indian fairs and the Meccan pilgrimage. Mecca is the reinforcing station of cholera between the Gulf of Bengal and Europe; it is there especially that the chief danger lies."

The measures required appear to be the installation of medical posts and posts of inspection at two points, the most important to be watched—Thor and Camaran. Every ship and every caravan of pilgrims should be accompanied by a medical staff furnished with all that is necessary for the purification and disinfection of the sick. Other matters for consideration are the reorganization of the sanitary service of India, the regulation of the great fairs of that country, the organization of a system of inspection of the pilgrims before leaving the Indian ports, and the curatorship of the sacred wells in which the Mussulmans bathe and drink at the same time.

The American delegates to the Conference are Dr. E. O. Shakespeare, Dr. Stephen Smith, and Dr. Preston H. Bailhache.

We await with much interest the outcome of the deliberations of this conference.

A Bill for an International Maritime Conference for the Better Care and Protection of Animals in Transit is now in the hands of the Committee on Inter-State and Foreign Commerce of the House of Representatives at Washington, and is one that in the interests of civilization and humanity should be passed. The bill provides:

"That the President of the United States be, and he hereby is, authorized and requested to invite the government of each maritime nation to send delegates to a quarantine conference that shall assemble at such time and place as he may designate, and to appoint seven delegates, one of whom shall be an official of the Treasury Department, one an official of the Department of Agriculture, one a representative of the steam marine, one a representative of the sailing marine, one citizen familiar with the cruelties to animals practised at sea, one citizen familiar with the importation of blooded horses, and one citizen engaged in the transportation of cattle, to represent the United States at said quarantine conference, and to fill vacancies in their number.

"It shall be the object of said quarantine conference to make, revise, and amend the rules, regulations, and practice concerning the transportation of animals at sea and their lives and slaughter in quarantine; for the proper construction of vessels for animals in transit; for the punishment of navigation companies or vessel-owners, their officers and employés, for cruelty to animals at sea; to make navigation companies or vessel-owners liable in damages for destruction of or injury to animals in transit; and to formulate and submit for ratification to the governments of all maritime nations proper international regulations, laws, penalties, and punishments for cruelty to animals at sea."

Here is a work for the anti-vivisection societies, and one wherein they will certainly be acting both in the interests of true kindness and of true science. A thousand times more suffering takes place in the transport of one herd of cattle from the plains of the West to Liverpool than has ever been caused by all the vivisection experiments of all time. But aside from the humane aspect of the question there is the sanitary side. The flesh of animals hideously tortured as these are is necessarily poorer and more dangerous food than that of healthy and properly-cared-for animals. It is well known that mental and physical pain and passion profoundly alter the tissues and secretions of animals, and may even render them toxic. The filth and crowding also intensifies and scatters every communicable disease. Medicine and noble sentiment here unite for a common work that needs to be done.

Liability for Injuries when Death follows Surgical Operations.—When death results from a personal injury as its direct and proximate cause the party responsible for the latter is liable for such death. In the case of Rettig *vs.* Fifth Avenue Transportation Company, recently decided by the Superior Court of New York City, General Term, which was an action brought to recover damages for alleged negligent acts causing injuries resulting in the death of the injured person, the defence was raised that death was rather caused by a surgical operation than by the injuries complained of. One of the attending physicians at the hospital to which the injured man was taken testified that he died from the result of his injuries, that his condition necessitated a surgical operation, which was skilfully performed, and that he died of the shock that followed. This evidence is declared admissible, and the court holds that the surgical operation and the consequences flowing from it in no manner relieved the transportion company from liability for the death as a result of the injuries inflicted by its negligence. Indeed, the court shows that it has been held that when a person who, through the negligence of another, has received an injury which, without a surgical operation, would cause his death, employs a competent and skilful surgeon, by whose mistake the operation is not successful, and the patient die, the wrongdoer is not shielded from liability by the surgeon's error; and this although the operation is the immediate cause of the death.

The Right Policy and the Right Principle.—We warmly commend to the earnest consideration of the members of the medical profession generally and of the American Medical Association in particular, the frank and outspoken language of a resolution recently adopted unanimously by the Ottawa City Medical Society to the effect that "under no circumstances shall the members of this Society consult with any homeopathic or other irregular practitioner." These are brave and noble words and will receive the indorsement of right-minded men

everywhere who recognize that there can be but one kind of physician and not halves and quarters and eighths and more minute fractions. The true physician, as we have more than once taken occasion to say, will use any remedy whose nature is capable of determination, whatever its source, independently of creed or dogma, if he but knows that it will save life, prevent disease, or relieve suffering. There may be homeopaths, and eclectics, and Thompsonians, and faith-curers and what not, but a physician should truly be a *physician*—nothing more, nothing less.

The First Chinese Medical College.—The first medical college worthy the name established by the Chinese Government was recently opened with formal ceremony at Tientsin. The project owes its origin to the intelligence and energy of the Viceroy of China and his wife, who constructed the necessary buildings and placed the direction in the hands of a distinguished graduate of the University of Dublin, selected by the late Sir Andrew Clark. The establishment of the college is attributed to the efforts of the Viceroy's medical attendant, Dr. Irwin, and to the influence of a Canadian woman, Dr. King. Some twenty well-educated English-speaking Chinamen have enrolled themselves as students, and the work of instruction has already been begun.

Liability of the Husband for Medical Attendance upon the Wife.—President Judge Hanna, in delivering the opinion of the Orphans' Court of Philadelphia, in the case of Waesch's Estate, says: The liability of the husband for medical attendance upon his wife, even although she has a separate estate, is too well settled to admit of argument. He is primarily liable, and her estate is liable only in case he be insolvent. If any balance then remains for distribution, the expenses he should have paid will be deducted from his distributive share.

The Cleveland Medical Society, although but a year old, seems established on a secure basis. Its membership already numbers two hundred and is growing rapidly. Permanent quarters for the Society and a library are projects well under way. The Society has done good work in uniting the medical profession of Cleveland into a harmonious and influential body.

SELECTIONS.

THE PRESS, THE QUACKS, AND THE PUBLIC.

AN address on this subject was delivered on Saturday evening at Toynbee Hall, E. C., by Mr. Ernest Hart. After referring in a general way to the growing power of the press, its accumulating responsibilities, and the admirable manner in which on the whole they were fulfilled, Mr. Hart turned to certain phases of journalistic responsibility which more especially came under his notice as a medical editor. He cited a considerable number of instances in which untold harm was effected at the present moment by the facility with which a considerable number of journals of high position and large circulation placed their columns at the disposal of a large class of persons who habitually practised open falsehood and palpable deceit, and worked untold harm among the more credulous sections of their readers. The vast circulation of the daily and weekly press, growing in importance, made this subject one of daily increasing moment, and he openly and directly charged a large proportion of the newspaper press of this country with sacrificing their duty, the honor of their calling, and the public interest to the inducements of palpable quacks and venders of either dangerous or insidious wares, offered at preposterous prices under palpably false pretences. The health of the people was being undermined, their morals were being sapped, and they were being robbed wholesale by unscrupulous venders of secret medicines; worse than this, a great proportion of religious papers and provincial papers sold their columns to persons who openly traded upon the weaknesses, the sins, and the fears of the married and unmarried of both sexes. The quack and patent-medicine impostor of olden times had a limited sphere of mischief; he had his cart or his stall in the market-place, and for the most part he was more ridiculous than harmful, but now limited companies were formed, syndicates were established, and great financial operations were undertaken to carry out an extensive system of preying upon the public with the aid of the vast publicity sold by the newspapers. Mr. Ernest Hart then read correspondence which he had had with the managers of some of the leading newspapers, in which some of them had frankly recognized their responsibilities in the matter, and described the precautions by which they protected their advertising columns from becoming the medium of such wholesale deceptions of the public. He referred, however, to the details of the Harness system of advertising, and to the advertisements and editorial puffs afforded quite recently to dangerous adventurers, free-lances in irregular medicine, and spoke of the career of the Anna Ruppert skin-lotions and to some of the results of the public medical lectures, freely reported in the daily papers. He asked that something of the same censorship should be exercised over the advertisements and editorials in the papers in dealing with medical matters as was admittedly exercised in ordinary advertisements relating to law, to commerce, and financial affairs. Advertisements putting forth evidently unfounded and impossible statements as to banking, or lotteries, or giving racing tips or gambling incitements, were not admitted into respectable papers. Why should the monstrous, dangerous, and palpably false statements and delusive promises put forward by the exploiters of secret medicines be alone accorded the unrestricted publicity of newspapers, great and small? Mr. Hart proceeded to say that the worst offenders were papers often full of religious pretension and social philanthropy. The evening papers, even in London, were great offenders, and the Sunday papers, from some of which he read extracts. Some Sunday and evening papers of the metropolis were setting the abominable example of publishing the monstrous statements of the quack advertiser as editoria articles in ordinary type. This was sinking to a lower depth of degradation than was customary, even in the lower types of British journalism, and was quite unworthy of papers having otherwise many claims to consideration.—*British Medical Journal, No. 1726, p. 208.*

PRESIDENT ELIOT ON INTERCOLLEGIATE SPORTS.

PRESIDENT ELIOT'S annual report was made public on the 20th inst. He says:

"In the highly competitive sports which give rise to exciting intercollegiate contests—namely, boat-racing, baseball, and football—there have been developed in recent years some evils of a serious nature. No sport which requires of the players more than two hours a day during the term time is fit for college use. No student can keep up his studies and also play his full part in any one of these three sports as at present conducted. There is something extremely inappropriate in the extravagant expenditure on athletic sports at such institutions as Harvard and Yale. In the game of football the players have been forced by public opinion to overtrain and overwork, until there is great risk of injury and even death. To become brutal and brutalizing is the natural tendency of all sports which involve violent personal collision between the players, as in football."

In the matter of remedies the President suggests the following changes:

1. There should be no freshman intercollegiate matches or races.

2. No games—intercollegiate or other—should be played on any other but college fields belonging to one of the competing colleges, or in the college town.

3. No professional student should take part in any intercollegiate contests.

4. No student should be a member of a university team or crew in more than one sport within the same year.

5. No football should be played until the rules are so amended as to diminish the number and the violence of the collisions between the players, and provide for the enforcement of the rules.

6. Intercollegiate contests in any one sport should not take place oftener than every other year.

REVIEWS.

MINOR SURGERY AND BANDAGING, INCLUDING THE TREATMENT OF FRACTURES AND DISLOCATIONS, TRACHEOTOMY, INTUBATION OF THE LARYNX, LIGATION OF ARTERIES, AND AMPUTATIONS. By HENRY R. WHARTON, M.D., Demonstrator of Surgery and Lecturer on Surgical Diseases of Children in the University of Pennsylvania; Surgeon to the Presbyterian Hospital, the Methodist Episcopal Hospital, and the Children's Hospital; Consulting Surgeon to the Presbyterian Orphanage. Second edition, thoroughly revised and enlarged, with 416 illustrations. Pp. 529. Philadelphia: Lea Brothers & Co., 1893.

THIS book, as its title expresses, is one which deals with more than is usually or legitimately included in a work upon minor surgery. It is probably this fact which has found for it so many friends as to necessitate the publication of another edition.

Part I is devoted to the subject of bandaging, the many methods of the application of the bandage being well illustrated by cuts, most of them from photographs. The various procedures of minor surgery—amongst which, however, are included tracheotomy and intubation of the larynx—are described in Part II. Here will be found also a very good account of the theory and practice of asepsis and antisepsis in the treatment of wounds, which the author has carefully revised for this edition, a description being given of all of the antiseptic agents now employed, as well as plain directions for the preparation of materials and dressings used in aseptic surgery. Parts III, IV, V, and VI, in which are described respectively fractures, dislocations, ligation of arteries, and amputations, are written in as plain and practical a manner as the rest of the book, and are amply illustrated with well-chosen cuts.

We congratulate Dr. Wharton upon the success which has attended his book, and we feel sure that the additions to this second edition will bring to it even greater success.

THE MODERN CLIMATIC TREATMENT OF INVALIDS WITH PULMONARY CONSUMPTION IN SOUTHERN CALIFORNIA. By P. C. REMONDINO, M.D. Detroit, Mich.: George S. Davis, 1893.

THOSE who think of sending patients to California will do well to read Dr. Remondino's excellent little book. The advice given is good and the meteorologic and epidemiologic statistics cited will aid in determining what cases to send to that region. There are, perhaps, too many and too long quotations for a booklet of 126 pages, and we would have wished the advertisements of nostrum and of real-estate omitted from the fly leaves. For this, however, publisher and not author is responsible.

CORRESPONDENCE.

THE TERMS "INFECTIOUS" AND "CONTAGIOUS."

To the Editor of THE MEDICAL NEWS:

SIR: Your editorial in the issue of THE MEDICAL NEWS for January 27th on "The Infectiousness of Tuberculosis" revives a feeling which has often occurred to me of late, and which perhaps has also occurred to others, that the time has come for an authoritative expression on the part of those best qualified to judge—that is, the pathologists—as to the exact sense in which the terms *infection* and *contagion* should be used. When myself a teacher of pathology some years ago, following Wagner, and, I believe, most German pathologists of that day, I taught that an infectious disease is any disease due to a specific cause, whether such cause originates in another person having the same disease or from some external source, as the atmosphere or soil. Then, after the bacterial origin of these diseases came to be admitted, the definition of an infectious disease became a "disease caused by the implantation and proliferation of a pathogenic microörganism," not including, however, the parasitic skin-diseases. Thus defined, infectious diseases are divisible into two groups, *contagious* and *miasmatic*. Contagious diseases are those derived from others having the same disease, while

miasmatic are those of which the cause originates externally. Of contagious diseases typical instances are, of course, smallpox and scarlet fever, while a typical instance of miasmatic disease is malarial fever. Thus infectious diseases include contagious diseases, and while every contagious disease is an infectious disease every infectious disease is not a contagious disease.

Modern studies have greatly altered the list of diseases in each of these categories, that of the contagious diseases having been enlarged by the addition of many formerly included among miasmatic, while the latter have grown correspondingly less numerous. Thus yellow fever and even typhoid fever, always regarded as infectious but formerly classed as miasmatic, are now included among the contagious, so that malarial fever remains essentially the sole miasmatic disease. To the former category tuberculosis has now to be added, being both infectious and contagious, through the tubercle-bacillus, which is the contagium or specific cause, the sputum being the contagium-bearer. The idea of contact implied in the etymology of the word contagious is the misleading idea. The absurdity, however, of applying the term contagious to the diseases only communicable by *actual* contact is apparent, because it is well known that smallpox can be communicated from one person to another without actual contact; and if the term were restricted to such cases as actually originate by contact, smallpox would sometimes be a contagious disease and sometimes not.

The term miasmatic-contagious was at one time applied to diseases of which the true origin was doubtful or which might be both contagious and miasmatic.

This use of the terms may be all wrong in the light of modern knowledge, but in such matters as these the pathologists should give the stamp to our thought, and this would seem to be a suitable time for them to agree upon such use of these terms as our modern knowledge demands, and give those who desire to use them accurately the benefit of their *united* opinions. The idea of what constitutes an infectious disease seems pretty definite. But what shall we do with "contagious"? Shall it be made to mean the same as infectious? Certainly the parasitic skin-diseases are contagious, and contagious in the strict meaning of the word, but I believe they are not regarded as infectious.

JAMES TYSON, M.D.

1506 SPRUCE STREET.

THE OPERATION OF VAGINAL HYSTERECTOMY BY ENUCLEATION DUE TO LANGENBECK.

To the Editor of THE MEDICAL NEWS,

SIR: I find on referring to the literature of the subject, that the operation of vaginal hysterectomy by enucleation (see MEDICAL NEWS, February 10, 1894) is *not* original with Dr. Pratt, but is a revival of the old operation of Langenbeck (1813).

Wrisberg and Monteggia *first recommended* total extirpation in carcinoma of the uterus. The first operations of this kind (Marschall, 1783; Langenbeck, 1813) were performed on prolapsed uteri; strictly speaking, were not total extirpations.

Langenbeck's successful operation exerted great influence, and his method of subperitoneal enucleation of the uterus long dominated the opinions of his followers.

Abstract of Langenbeck's method. "I now came to that portion of the uterus, which, seen from the front, was inserted into the peritoneum as into a cloth. I also separated very accurately the substance of the uterus from the peritoneum, without cutting it, because otherwise the intestines might have protruded, and constantly drew out the uterus. I continued this separation to the upper rounded border of the fundus uteri, and then cut the uterus out of the peritoneum in such a way that a small piece, which seemed to be perfectly healthy, remained connected with the peritoneum. This was consequently a true enucleation of the uterus out of the peritoneum, so that the latter, in connection with the vagina, formed an empty bag." The ovaries, which Langenbeck thought he had removed, were found at the autopsy.

In 1822 Sauter performed the first extirpation of a carcinomatous uterus *in situ* through the vagina. He first separated the fornix from the uterus and then attempted to enucleate the uterus from its peritoneum. The operation was unsuccessful and the bladder was injured. He then opened into the anterior peritoneal fossa and divided the lateral connections of the uterus with the tubes and broad ligaments; then grasped the fundus, turned it over, and separated its last connections with the posterior fornix. The intestines were replaced, the vagina tamponned; not more than one and a half pounds of blood were lost. Complete recovery followed, but the woman died four months later, of pulmonary edema.

Récamier's much more perfect method (1829) is distinguished from that of Sauter by the fact that, after opening the anterior peritoneal fossa, the upper two-thirds of the broad ligament alone were removed, but the lower third and uterine artery were grasped between the index finger and thumb and ligated. Hemorrhage was slight and removal of the ligatures followed on the tenth day. In 1830 Delpech recommended a combination of the hypogastric and vaginal methods.

Malgaigne's (J. F.) proceeding.[1] "Circularly incise the vagina as far down as the disease allows, gently and cautiously down to its external cellular tunic; dissect it up, reflecting it like the skin in an amputation; push back the bladder or intestines, if you meet them, beyond the reach of the instruments; detach the womb if possible by enucleation and without opening the peritoneum; or open that membrane cautiously; and lastly, divide the lateral attachments of the womb by which its vessels pass to it. The lateral attachments may be all tied together before they are cut; or, better, the arteries may be tied immediately after they are divided; and lastly, the operation is terminated, uniting by suture the wound in the vagina, so as to shield the peritoneum from contact with the air. Langenbeck once had recourse to an analogous proceeding; having found the bottom of the wound healthy, he carefully separated from it the diseased parts, and thus avoided opening the peritoneum; the woman recovered."

Very respectfully,

ROBERT REYBURN, M.D.

WASHINGTON, D. C.

[1] Op. Surg., transl. by F. Brittan. Philadelphia: Blanchard & Lea, 1851. Page 551.

TO PREVENT THE SPREAD OF TUBERCULOSIS.

To the Editor of THE MEDICAL NEWS,

DEAR SIR: The exceedingly interesting discussion on "The Contagiousness of Tuberculosis," reported in THE NEWS of February 10th, is probably the most important deliverance on the subject which has recently been given to medical science.

Granting that the dried sputum is the infecting material, it seems to me that the disinfection of public vehicles is of even greater importance than the disinfection of houses. The abominable habit of spitting in street-cars is probably one of the most prevalent sources of contagion. It is true that in this city notices are displayed in most of the street-cars, forbidding the habit, but as the officials, from president to conductor, appear equally uninformed and indifferent, no attempt is ever made to enforce the rule.

If the Board of Health would use its influence with the higher officials of the car-companies, and the profession would endeavor to interest individual stockholders in the matter, it might be possible to have instructions issued to conductors to call the attention of the filthy offenders to their misconduct; and if these instructions were carried out effectually, the spitters would probably prefer to abandon their habit rather than stand the constant staring to which they would be subjected by their fellow-passengers, when called to account.

Is not the tuberculous spitter as real a source of danger, under the circumstances, as a smallpox patient? The latter would clear a car in an instant, if his disease were recognized, while the consumptive spitter continues undisturbed to disgust the decent among his fellow-passengers, and scatter poison absolutely broadcast as he goes. Is there no remedy for this?

Yours respectfully,

GILBERT H. SHEARER.

2128 ARCH ST., PHILADELPHIA.

ORCHECTOMY FOR HYPERTROPHY OF THE PROSTATE.

(*A Second Note.*)

To the Editor of THE MEDICAL NEWS,

SIR: A short time ago (see THE NEWS, December 30, 1893, p. 748) I stated that I had removed both testicles from an old man suffering from enlarged prostate, in accordance with the suggestion of Prof. J. William White. Eight weeks have elapsed since the operation, and the patient is practically cured.

In another case, in which sections of the vasa deferentia were removed, I can as yet see no change.

Two weeks ago I removed the testicles of another old man, who stated that he had not urinated except through a catheter for two years. Since the operation he has passed about an ounce of urine naturally several times every day.

Further results will be published hereafter.

I trust other surgeons will publish brief reports of their experience with this promising procedure.

Respectfully,

FRANCIS L. HAYNES.

LOS ANGELES, CAL.

NEWS ITEMS.

Suicide.—A committee of the New York Medico-Legal Society, to which was submitted the question of the repeal of the existing law making punishable unsuccessful attempts at suicide, recently presented the following report, which was approved and ordered to be submitted to the Legislature of the State and the Constitutional Convention:

1. It [the law] is wholly indefensible from the standpoint of this great principle, that all penal laws should have for their object the deterring rather than the punishment of crime.

2. It in effect repeals the former laws making suicide a crime, and makes its unsuccessful attempt punishable only; so that its effect is to stimulate the would-be suicide to higher efforts toward self-destruction to avert the punishment it visits only upon failure.

3. The act, therefore, instead of serving as a deterrent to the commission of crime, which should be the aim of penal legislation, is one which, in its whole scope and effect, incites to and probably actually increases the volume of this crime.

4. Civilization, in the recent centuries, has regarded and treated suicide as a crime, and has attempted to so frame its penalties as to act as a deterrent upon the minds of those who sought or have contemplated it.

The majority of mankind would be influenced by any post-mortem punishment that would bring disgrace or reproach upon the names, family, or friends of the suicide.

The existing statute ignores the universal recent judgment of the race, in relieving the successful suicide from all such restraints, with their conceded deterrent effects.

5. A large proportion of suicides are confessedly those laboring under insane delusions. Unsuccessful attempts by such, under the existing statute, are pitiful examples of the incongruity and unwisdom of the law in its practical operation.

6. It is claimed, and with great propriety, that the present statute is practically inoperative.

We respectfully submit that this enactment should no longer remain among our criminal statutes.—*Medico-Legal Journal*, vol. xi, No. 3, p. 331.

Dr. August Hirsch, Professor of Special Pathology and Therapeutics and of the History of Medicine in the University of Berlin, died January 28th, at the age of seventy-seven years. His most important publication was a handbook of Geographical and Historical Pathology.

Dr. T. Cranstoun Charles, Lecturer on Practical Physiology at St. Thomas' Hospital Medical School, died on January 24th, in the forty-fifth year of life. He was the author of a handbook of Physiological Chemistry.

BOOKS AND PAMPHLETS RECEIVED.

On Some Considerations upon a Kind of Acute Gangrene in Relation to Atheroma and Embolism. Its Treatment and Operative Results. By Dr. R. Lavista. Mexico: Printing Office of F. P. Hoeck, 1893.

Inebriety. By R. M. Phelps, M.D. Reprinted from the Northwestern Lancet, 1893.